

RISO

MZ870 / MZ890

MZ1070 / MZ1090

TECHNICAL MANUAL

**Differential information
compared to the existing MZ7 & MZ9 Series.**

VERSION 0.91
OCTOBER, 2010

Copyright : 2010 Riso Kagaku Corporation
All Rights Reserved. This Technical Manual was prepared and written for the exclusive use of RISO International Group Certified Dealers. Reproduction and/or transmittal of this material in any form or by any means, including photocopying or recording of the information is strictly prohibited without the consent of a member of RISO International Group.

RISO INTERNATIONAL GROUP

RISO KAGAKU CORPORATION (JAPAN)
RISO, INC. (U.S.A.)
RISO EUROPE LIMITED (U.K.)
RISO HONG KONG (HONG KONG)
RISO UK (U.K.)
RISO THAILAND LIMITED (THAILAND)
RISO KOREA LIMITED (KOREA)

RISO DEUTSCHLAND GMBH (GERMANY)
RISO FRANCE (FRANCE)
RISO IBERICA (SPAIN)
RISO CANADA (CANADA)
ZHUHAI RISO TECHNOLOGY (CHINA)
RISO AFRICA (SOUTH AFRICA)
RISOGRAPH ITALIA (ITALY)

INTRODUCTION

The existing MZ7 & MZ9 Series machines are based on RZ Series.

The new MZ870, MZ890, MZ1070 and MZ1090 Models are based on EZ Series.

Many of the parts used on the new MZ models are those of EZ machines.

It is therefore important to use the Spare Parts List for MZ870, MZ890, MZ1070 and MZ1090 Models in ordering the parts for these new MZ models.

Though the parts are replaced from RZ type to EZ type, the removal of parts, etc. remains very similar.

This technical manual covers the major differences between the existing MZ (MZ7 & MZ9) and the new MZ (MZ8 & MZ10) models.

The information on the small changes, such as replacement of RZ based parts to EZ based parts are omitted in this manual.

INDEX

Chapter 1	Maintenance
Chapter 2	Machine Summary
Chapter 3	Machine Drive Section
Chapter 4	First Paper Feed Section
Chapter 5	Second Paper Feed Section
Chapter 11	Master Removal Section
Chapter 14	Master Making Section
Chapter 15	Test Mode
Chapter 16	Panel Message
Chapter 17	Other Precautions

CHAPTER 1: MAINTENANCE

Contents

NOTE2

CAUTION.....3

Warning4

 Important Safety Precautions4

1. Work Precautions5

NOTE

The existing MZ7 & MZ9 Series machines are based on RZ Series.

The new MZ870, MZ890, MZ1070 and MZ1090 Models are based on EZ Series.

Many of the parts used on the new MZ models are those of EZ machines.

It is therefore important to use the Spare Parts List for MZ870, MZ890, MZ1070 and MZ1090 Models in ordering the parts for these new MZ models.

Though the parts are replaced from RZ type to EZ type, the removal of parts, etc. remains very similar.

This technical manual covers the major differences between the existing MZ (MZ7 & MZ9) and the new MZ (MZ8 & MZ10) models.

The information on the small changes, such as replacement of RZ based parts to EZ based parts are omitted in this manual.

CAUTION

[Handling of Lithium Battery]

- Never fail to follow the following instructions when you discard the used lithium battery.

1. Never let the battery short-circuited.

If the (+) and (-) terminals contact each other or metal materials, the battery will be short-circuited.

If the batteries are collected and stored in disorderly or one upon another, the above-mentioned case will occur.

- DANGER -

If the battery is short-circuited, it will heat up and may in some cases explode into fire.

2. Never heat up the battery.

- DANGER -

If you heat the battery up to more than 100 degrees Celsius or put it into the fire, it may burn dangerously or explode.

3. Never disassemble the battery or press it into deformation.

- DANGER -

If you disassemble the battery, the gas pouring out of the inside may hurt your throat or the negative lithium may heat up into fire.

If the battery is pressed into deformation, the liquid inside may leak out of the sealed part or the battery may be short-circuited inside an explode.

4. Never fail to keep the battery out of reach of children.

If you put the battery within reach of children, they may swallow it down.

Should they swallow the battery, immediately consult the doctor.

[Replacement of the Lithium Battery]

1. The lithium battery must be replaced by a trained and authorized service technician.
2. The battery must be replaced only with the same or equivalent type recommended by the manufacturer.
3. Discard used batteries according to the manufacturer instructions.

Perchlorate Material-special handling may apply,

See www.dtsc.ca.gov/hazardouswaste/perchlorate

This product may contain certain substances which are restricted when disposed.

Therefore, be sure to consult your contracted service dealer.

Warning

!! WARNING !!

Important Safety Precautions

1. Always disconnect electrical supply before placing hands in the machine.

I. To avoid injuries:

Be sure to disconnect the electrical power before disassembling, assembling, or when making adjustments on the machine.

II. Protection of the machine:

Make sure to turn OFF the power to the machine before plugging or unplugging the electrical connectors, or when connecting a Meter.

2. Always connect electrical connectors firmly.

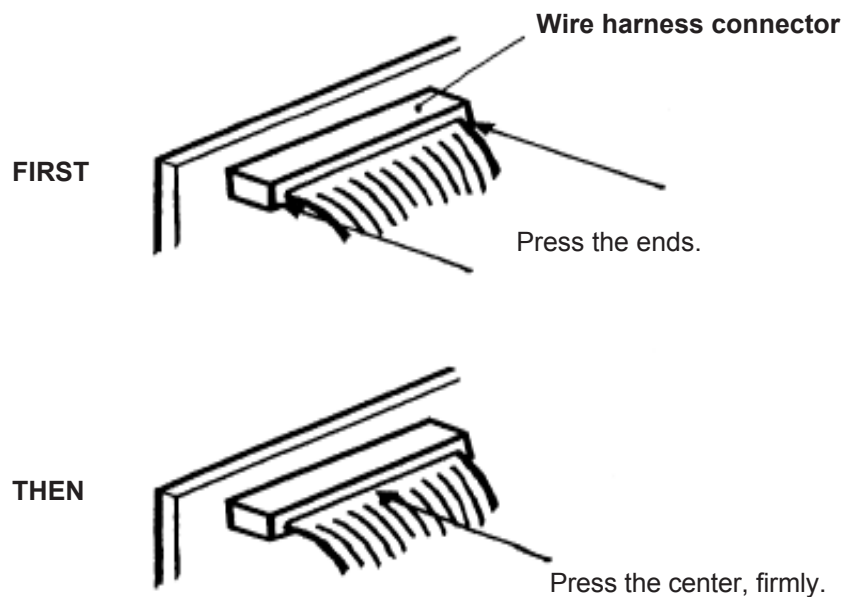
I. To avoid electrical failure:

The connectors must be connected firmly together and onto the PCBs.

Press on the ends of the connectors and then on the middle to ensure a firm fit.

II. Protection of the electrical components:

The electrical components may be damaged due to short circuits caused by a loose connector.



1. Work Precautions

When conducting maintenance work, be careful to avoid injury caused by springs or the sharp edges of sheet metal.

(1) Inspection

If you discover any defects or problems during an inspection, fix the problems or if necessary take steps such as replacing a part.

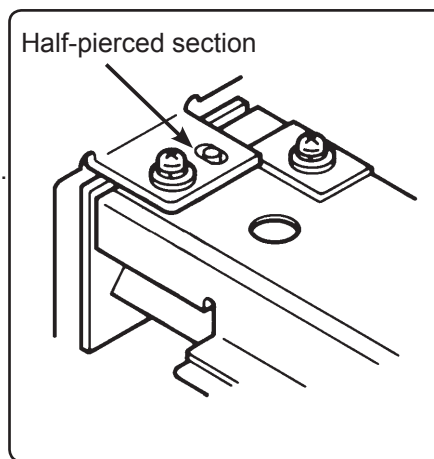
(2) Removal

Check the problem area. At the same time, examine the cause of the problem and determine whether the part needs to be removed or disassembled. Next proceed according to the procedures presented in the Technical Manual. In cases where, for example, it is necessary to disassemble areas with large numbers of parts, parts which are similar to each other, or parts which are the same on the left and right, sort the parts so that you do not mix them up during reassembly.

- (1) Carefully sort the removed parts.
- (2) Distinguish between parts which are being replaced and those which will be reused.
- (3) When replacing screws, etc., be sure to use the specified sizes.

(3) Assembly and Installation

Unless specified otherwise, perform the removal procedures in reverse during assembly and installation. In cases where protrusions or holes are provided to assist in positioning parts, use them for accurate positioning and securing.



(Protrusions and holes for positioning parts → Half pierced section)

(4) Always connect electrical connectors firmly.

1) To avoid electrical failure:

The connectors must be connected firmly together and onto the PCBs.

2) Protection of the electrical components:

The electrical components may be damaged due to short circuits caused by a loose connector.

(5) Warning on the disposal of LCD Touch Panel.

The back light tube of LCD of the Touch Panel on this Model contains mercury which must be recycled or disposed of as hazardous waste.

MEMO

CHAPTER 2: MACHINE SUMMARY

CONTENTS

Machine Specifications.....	2-3
Optional Accessories	2-3
RISO MZ 870	2-4
RISO MZ 890	2-6
RISO MZ 1070	2-8
RISO MZ 1090	2-10

MEMO

Machine Specifications

Optional Accessories

A variety of optional accessories are available to enhance the capabilities of the machine.
For details about the optional accessories, see your dealer (or authorized service representative).

◆ **Auto Document Feeder AF-VI:II**

Feed up to 50 sheets of originals automatically.

◆ **Auto Document Feeder DX-1**

Feed up to 50 sheets of originals automatically. Both sides of original can be scanned automatically.

◆ **Color Drum (Cylinder)**

Simply change the Drum (Cylinder) to print in multiple colors (colours). (Case included)

◆ **Key Card Counter**

With a single button press, shows the numbers of printed copies and consumed masters within a given period of time. This can help you manage costs.

◆ **Job Separator**

With the Programed Printing function, allows the machine to print and sort into groups separated by tape.

◆ **RISO Network Card**

Use to directly connect the machine to the network.

This comes with the RISO-MONITOR software that allows you to check the status of the machine from computers.

◆ **Document Storage Card DM-128CF**

A Storage Card for using the Storage Memory function.

◆ **RISO Controller IS300**

A custom controller enabling the machine to be used as a network-connected PostScript 3 printer.

◆ **RISO Stand D type (II)**

◆ **RISO Stand N type (II)**

◆ **Wide Stacking Tray**

Paper Receiving Tray for sizes A6 - A3/Ledger 340 mm × 555 mm ($13\frac{3}{8}$ " × $21\frac{13}{16}$ ").

◆ **Cover Kit: Paper Feed/Ejection**

◆ **Card Feed Kit**

◆ **Envelope Feed Kit**

Machine Specifications

RISO MZ870

Master-making/printing methods	High-speed digital master-making/full automatic stencil printing
Original Type	Book (10 kg (22 lb) or less), sheet
Original Size (max./min.)	When using the Glass Platen : 50 mm × 90 mm ($1^{15}/_{16}$ " × $3^{9}/_{16}$ ") - 310 mm × 432 mm ($12^{3}/_{16}$ " × 17") When using Auto Document Feeder AF-VI:II (option) : 100 mm × 148 mm ($3^{15}/_{16}$ " × $5^{13}/_{16}$ ") - 310 mm × 432 mm ($12^{3}/_{16}$ " × 17") When using Auto Document Feeder DX-1(option) : 105 mm × 128 mm ($4^{1}/_{8}$ " × $5^{1}/_{16}$ ") - 297 mm × 432 mm ($11^{11}/_{16}$ " × 17")
Original Paper Weight	When using the Auto Document Feeder AF-VI:II (option) : 50 g/m ² (13-lb bond) - 128 g/m ² (34-lb bond) When using Auto Document Feeder DX-1 (option) : Single-sided feeding : 40 g/m ² (11-lb bond) - 128 g/m ² (34-lb bond) Duplex-sided feeding : 52 g/m ² (14-lb bond) - 105 g/m ² (28-lb bond))
Print Paper Size (max./min.)	- Maximum size 320 mm × 432 mm ($12^{9}/_{16}$" × 17")* *Up to 555 mm ($21^{13}/_{16}$") of vertical paper dimension may be used. If Print Drum (Cylinder) 1 is removed, and perform 1-Color (Colour) printing with Drum (Cylinder) 2 with print speed of "150 ppm", up to 364 mm ($14^{5}/_{16}$") of vertical paper dimension may be used. - Minimum size – Dual-Color (Colour) Print 182 mm × 257 mm ($7^{3}/_{16}$" × $10^{1}/_{8}$") (B5) – 1-Color (Colour) Print (with Print Drum (Cylinder) 1) 100 mm × 148 mm ($3^{15}/_{16}$" × $5^{13}/_{16}$") – 1-Color (Colour) Print (with Print Drum (Cylinder) 2) 182 mm × 257 mm ($7^{3}/_{16}$" × $10^{1}/_{8}$") (B5)
Paper Supply Capacity	1000 sheets (64 g/m ² (17-lb bond))
Print Paper Weight	46 g/m ² (13-lb bond) - 210 g/m ² (110-lb index)
Image Processing mode	Line, Photo (Standard/Portrait/Group), Duo (Line/Photo/Shadow off), Pencil (Darker/Lighter)
Master-making Time (for A4/portrait/100% reproduction ratio)	Approx. 57 seconds (for Dual-Color print) Approx. 24 seconds (for single-color print (Drum (Cylinder) 1)) Approx. 34 seconds (for single-color print (Drum (Cylinder) 2)) (when only single Print Drum (Cylinder) is set)
Printing Area (max.)	291 mm × 413 mm ($11^{7}/_{16}$ " × $16^{1}/_{4}$ ")
Print Reproduction Ratio	Zoom : 50 - 200% Standard reproduction ratio (enlargement) : 163%, 141%, 122%, 116% Standard reproduction ratio (reduction) : 87%, 82%, 71%, 61% Margin+ : 90 - 99%
Print Speed	Approx. 60 - 150 sheets per minute (Control panel: five steps variable, touch panel: 150 ppm)
Print Position Adjustment	Vertical : ±15 mm ($\pm^{19}/_{32}$ ") Horizontal : ±10 mm ($\pm^{3}/_{8}$ ")
Ink Supply	Full automatic (1000 ml per cartridge)
Master Supply/Disposal	Full automatic (approx. 220 sheets per roll)
Master Disposal Capacity	80 sheets
User Interface	LCD Touch Panel with Progress Arrow indicators, front-side operation

Optional Accessories	Auto Document Feeder AF-VI:II, Auto Document Feeder DX-1, Color Drum (Cylinder), Key Card Counter, Job Separator, RISO Network Card, Document Storage Card DM-128CF, RISO Controller IS300, RISO Stand D type (II), RISO Stand N type (II), Wide Stacking Tray, Cover Kit: Paper Feed/Ejection, Card Feed Kit, Envelope Feed Kit
Power Source	MZ870A : 100-240V~, 50/60Hz <7.3/3.0A>
Dimensions	When in use : 1625 mm (W) × 735 mm (D) × 740 mm (H) (63 ³¹ / ₃₂ " (W) × 28 ¹⁵ / ₁₆ " (D) × 29 ¹ / ₈ " (H)) When in storage : 1005 mm (W) × 735 mm (D) × 740 mm (H) (39 ⁹ / ₁₆ " (W) × 28 ¹⁵ / ₁₆ " (D) × 29 ¹ / ₈ " (H))
Weight* ¹	Approx. 171 kg (376 ⁵ / ₈ lb)
Safety Standard	IEC-60950-1 compliant, Indoor, pollution degree 2* ² , At altitudes of 2000m or lower

Note:

- Please note that due to improvements and changes to the machine, some images and explanations in this manual may not correspond to your machine.
- The specifications are subject to change without prior notice.

*¹ The weight does not include Ink and Master.

*² The pollution degree of the usage environment due to dirt and dust in the air. Degree "2" corresponds to a general indoor environment.

Machine Specifications

RISO MZ890

Master-making/printing methods	High-speed digital master-making/full automatic stencil printing
Original Type	Book (10 kg (22 lb) or less), sheet
Original Size (max./min.)	When using the Glass Platen : 50 mm × 90 mm (1 ¹⁵ / ₁₆ " × 3 ⁹ / ₁₆ ") - 310 mm × 432 mm (12 ³ / ₁₆ " × 17") When using Auto Document Feeder AF-VI:II (option) : 100 mm × 148 mm (3 ¹⁵ / ₁₆ " × 5 ¹³ / ₁₆ ") - 310 mm × 432 mm (12 ³ / ₁₆ " × 17") When using Auto Document Feeder DX-1(option) : 105 mm × 128 mm (4 ¹ / ₈ " × 5 ¹ / ₁₆ ") - 297 mm × 432 mm (11 ¹¹ / ₁₆ " × 17")
Original Paper Weight	When using the Auto Document Feeder AF-VI:II (option) : 50 g/m ² (13-lb bond) - 128 g/m ² (34-lb bond) When using Auto Document Feeder DX-1 (option) : Single-sided feeding : 40 g/m ² (11-lb bond) - 128 g/m ² (34-lb bond) Duplex-sided feeding : 52 g/m ² (14-lb bond) - 105 g/m ² (28-lb bond))
Print Paper Size (max./min.)	- Maximum size 320 mm × 432 mm (12⁹/₁₆" × 17")* *Up to 555 mm (21¹³/₁₆") of vertical paper dimension may be used. If Print Drum (Cylinder) 1 is removed, and perform 1-Color (Colour) printing with Drum (Cylinder) 2 with print speed of "150 ppm", up to 364 mm (14⁵/₁₆") of vertical paper dimension may be used. - Minimum size Dual-Color (Colour) Print 182 mm × 257 mm (7³/₁₆" × 10¹/₈") (B5) 1-Color (Colour) Print (with Print Drum (Cylinder) 1) 100 mm × 148 mm (3¹⁵/₁₆" × 5¹³/₁₆") 1-Color (Colour) Print (with Print Drum (Cylinder) 2) 182 mm × 257 mm (7³/₁₆" × 10¹/₈") (B5)
Paper Supply Capacity	1000 sheets (64 g/m ² (17-lb bond))
Print Paper Weight	46 g/m ² (13-lb bond) - 210 g/m ² (110-lb index)
Image Processing mode	Line, Photo (Standard/Portrait/Group), Duo (Line/Photo/Shadow off), Pencil (Darker/Lighter)
Master-making Time (for A4/portrait/100% reproduction ratio)	Approx. 57 seconds (for Dual-Color print) Approx. 24 seconds (for single-color print (Drum (Cylinder) 1)) Approx. 34 seconds (for single-color print (Drum (Cylinder) 2)) (when only single Print Drum (Cylinder) is set)
Printing Area (max.)	291 mm × 425 mm (11 ⁷ / ₁₆ " × 16 ³ / ₄ ")
Print Reproduction Ratio	Zoom : 50 - 200% Standard reproduction ratio (enlargement) : 200%, 154%, 129%, 121% Standard reproduction ratio (reduction) : 78%, 65%, 61%, 50% Margin+ : 90 - 99%
Print Speed	Approx. 60 - 150 sheets per minute (Control panel: five steps variable, touch panel: 150 ppm)
Print Position Adjustment	Vertical : ±15 mm (± ¹⁹ / ₃₂ ") Horizontal : ±10 mm (± ³ / ₈ ")
Ink Supply	Full automatic (1000 ml per cartridge)
Master Supply/Disposal	Full automatic (approx. 215 sheets per roll)
Master Disposal Capacity	80 sheets
User Interface	LCD Touch Panel with Progress Arrow indicators, front-side operation

Optional Accessories	Auto Document Feeder AF-VI:II, Auto Document Feeder DX-1, Color Drum (Cylinder), Key Card Counter, Job Separator, RISO Network Card, Document Storage Card DM-128CF, RISO Controller IS300, RISO Stand D type (II), RISO Stand N type (II), Wide Stacking Tray, Cover Kit: Paper Feed/Ejection, Card Feed Kit, Envelope Feed Kit
Power Source	MZ890U : 100-240V~, 50/60Hz <7.3/3.0A>
Dimensions	When in use : 1625 mm (W) × 735 mm (D) × 740 mm (H) (63 ³¹ / ₃₂ " (W) × 28 ¹⁵ / ₁₆ " (D) × 29 ¹ / ₈ " (H)) When in storage : 1005 mm (W) × 735 mm (D) × 740 mm (H) (39 ⁹ / ₁₆ " (W) × 28 ¹⁵ / ₁₆ " (D) × 29 ¹ / ₈ " (H))
Weight*1	Approx. 171 kg (376 ⁵ / ₈ lb)
Safety Standard	IEC-60950-1 compliant, Indoor, pollution degree 2*2, At altitudes of 2000m or lower

Note:

- Please note that due to improvements and changes to the machine, some images and explanations in this manual may not correspond to your machine.
- The specifications are subject to change without prior notice.

*1 The weight does not include Ink and Master.

*2 The pollution degree of the usage environment due to dirt and dust in the air. Degree "2" corresponds to a general indoor environment.

Machine Specifications

RISO MZ1070

Master-making/printing methods	High-speed digital master-making/full automatic stencil printing
Original Type	Book (10 kg (22 lb) or less), sheet
Original Size (max./min.)	When using the Glass Platen : 50 mm × 90 mm ($1^{15}/_{16}$ " × $3^{9}/_{16}$ ") - 310 mm × 432 mm ($12^{3}/_{16}$ " × 17") When using Auto Document Feeder AF-VI:II (option) : 100 mm × 148 mm ($3^{15}/_{16}$ " × $5^{13}/_{16}$ ") - 310 mm × 432 mm ($12^{3}/_{16}$ " × 17") When using Auto Document Feeder DX-1(option) : 105 mm × 128 mm ($4^{1}/_{8}$ " × $5^{1}/_{16}$ ") - 297 mm × 432 mm ($11^{11}/_{16}$ " × 17")
Original Paper Weight	When using the Auto Document Feeder AF-VI:II (option) : 50 g/m ² (13-lb bond) - 128 g/m ² (34-lb bond) When using Auto Document Feeder DX-1 (option) : Single-sided feeding : 40 g/m ² (11-lb bond) - 128 g/m ² (34-lb bond) Duplex-sided feeding : 52 g/m ² (14-lb bond) - 105 g/m ² (28-lb bond))
Print Paper Size (max./min.)	- Maximum size 320 mm × 432 mm ($12^{9}/_{16}$" × 17")* *Up to 555 mm ($21^{13}/_{16}$") of vertical paper dimension may be used. If Print Drum (Cylinder) 1 is removed, and perform 1-Color (Colour) printing with Drum (Cylinder) 2 with print speed of "150 ppm", up to 364 mm ($14^{5}/_{16}$") of vertical paper dimension may be used. - Minimum size Dual-Color (Colour) Print 182 mm × 257 mm ($7^{3}/_{16}$" × $10^{1}/_{8}$") (B5) 1-Color (Colour) Print (with Print Drum (Cylinder) 1) 100 mm × 148 mm ($3^{15}/_{16}$" × $5^{13}/_{16}$") 1-Color (Colour) Print (with Print Drum (Cylinder) 2) 182 mm × 257 mm ($7^{3}/_{16}$" × $10^{1}/_{8}$") (B5)
Paper Supply Capacity	1000 sheets (64 g/m ² (17-lb bond))
Print Paper Weight	46 g/m ² (13-lb bond) - 210 g/m ² (110-lb index)
Image Processing mode	Line, Photo (Standard/Portrait/Group), Duo (Line/Photo/Shadow off), Pencil (Darker/Lighter)
Master-making Time (for A4/portrait/100% reproduction ratio)	Approx. 57 seconds (for Dual-Color print) Approx. 24 seconds (for single-color print (Drum (Cylinder) 1)) Approx. 34 seconds (for single-color print (Drum (Cylinder) 2)) (when only single Print Drum (Cylinder) is set)
Printing Area (max.)	291 mm × 413 mm ($11^{7}/_{16}$ " × $16^{1}/_{4}$ ")
Print Reproduction Ratio	Zoom : 50 - 200% Standard reproduction ratio (enlargement) : 163%, 141%, 122%, 116% Standard reproduction ratio (reduction) : 87%, 82%, 71%, 61% Margin+ : 90 - 99%
Print Speed	Approx. 60 - 150 sheets per minute (Control panel: five steps variable, touch panel: 150 ppm)
Print Position Adjustment	Vertical : ±15 mm ($\pm^{19}/_{32}$ ") Horizontal : ±10 mm ($\pm^{3}/_{8}$ ")
Ink Supply	Full automatic (1000 ml per cartridge)
Master Supply/Disposal	Full automatic (approx. 220 sheets per roll)
Master Disposal Capacity	80 sheets
User Interface	LCD Touch Panel with Progress Arrow indicators, front-side operation

Optional Accessories	Auto Document Feeder AF-VI:II, Auto Document Feeder DX-1, Color Drum (Cylinder), Key Card Counter, Job Separator, RISO Network Card, Document Storage Card DM-128CF, RISO Controller IS300, RISO Stand D type (II), RISO Stand N type (II), Wide Stacking Tray, Cover Kit: Paper Feed/Ejection, Card Feed Kit, Envelope Feed Kit
Power Source	MZ1070E : 220-240V~, 50/60Hz <3.0A> MZ1070A : 100-240V~, 50/60Hz <7.3/3.0A>
Dimensions	When in use : 1625 mm (W) × 735 mm (D) × 740 mm (H) (63 ³¹ / ₃₂ " (W) × 28 ¹⁵ / ₁₆ " (D) × 29 ¹ / ₈ " (H)) When in storage : 1005 mm (W) × 735 mm (D) × 740 mm (H) (39 ⁹ / ₁₆ " (W) × 28 ¹⁵ / ₁₆ " (D) × 29 ¹ / ₈ " (H))
Weight*1	Approx. 171 kg (376 ⁵ / ₈ lb)
Safety Standard	IEC-60950-1 compliant, Indoor, pollution degree 2*2, At altitudes of 2000m or lower

Note:

- Please note that due to improvements and changes to the machine, some images and explanations in this manual may not correspond to your machine.
- The specifications are subject to change without prior notice.

*1 The weight does not include Ink and Master.

*2 The pollution degree of the usage environment due to dirt and dust in the air. Degree "2" corresponds to a general indoor environment.

Machine Specifications

Specifications

RISO MZ1090

Master-making/printing methods	High-speed digital master-making/full automatic stencil printing
Original Type	Book (10 kg (22 lb) or less), sheet
Original Size (max./min.)	When using the Glass Platen : 50 mm × 90 mm ($1\frac{15}{16}$ " × $3\frac{9}{16}$ ") - 310 mm × 432 mm ($12\frac{3}{16}$ " × 17") When using Auto Document Feeder AF-VI:II (option) : 100 mm × 148 mm ($3\frac{15}{16}$ " × $5\frac{13}{16}$ ") - 310 mm × 432 mm ($12\frac{3}{16}$ " × 17") When using Auto Document Feeder DX-1(option) : 105 mm × 128 mm ($4\frac{1}{8}$ " × $5\frac{1}{16}$ ") - 297 mm × 432 mm ($11\frac{11}{16}$ " × 17")
Original Paper Weight	When using the Auto Document Feeder AF-VI:II : 50 g/m ² (13-lb bond) - 128 g/m ² (34-lb bond) When using Auto Document Feeder DX-1 : Single-sided feeding : 40 g/m ² (11-lb bond) - 128 g/m ² (34-lb bond) Duplex-sided feeding : 52 g/m ² (14-lb bond) - 105 g/m ² (28-lb bond)
Print Paper Size (max./min.)	- Maximum size 320 mm × 432 mm ($12\frac{9}{16}$" × 17")* *Up to 555 mm ($21\frac{13}{16}$") of vertical paper dimension may be used. If Print Drum (Cylinder) 1 is removed, and perform 1-Color (Colour) printing with Drum (Cylinder) 2 with print speed of "150 ppm", up to 364 mm ($14\frac{5}{16}$") of vertical paper dimension may be used. - Minimum size Dual-Color (Colour) Print 182 mm × 257 mm ($7\frac{3}{16}$" × $10\frac{1}{8}$") (B5) 1-Color (Colour) Print (with Print Drum (Cylinder) 1) 100 mm × 148 mm ($3\frac{15}{16}$" × $5\frac{13}{16}$") 1-Color (Colour) Print (with Print Drum (Cylinder) 2) 182 mm × 257 mm ($7\frac{3}{16}$" × $10\frac{1}{8}$") (B5)
Paper Supply Capacity	1000 sheets (64 g/m ² (17-lb bond))
Print Paper Weight	46 g/m ² (13-lb bond) - 210 g/m ² (110-lb index)
Image Processing mode	Line, Photo (Standard/Portrait/Group), Duo (Line/Photo/Shadow off), Pencil (Darker/Lighter)
Master-making Time (for A4/portrait/100% reproduction ratio)	Approx. 57 seconds (for Dual-Color print) Approx. 24 seconds (for single-color print (Drum (Cylinder) 1)) Approx. 34 seconds (for single-color print (Drum (Cylinder) 2)) (when only single Print Drum (Cylinder) is set)
Printing Area (max.)	291 mm × 425 mm ($11\frac{7}{16}$ " × $16\frac{3}{4}$ ")
Print Reproduction Ratio	Zoom : 50 - 200% Standard reproduction ratio (enlargement) : 200%, 154%, 129%, 121% Standard reproduction ratio (reduction) : 78%, 65%, 61%, 50% Margin+ : 90 - 99%
Print Speed	Approx. 60 - 150 sheets per minute (Control panel: five steps variable, touch panel: 150 ppm)
Print Position Adjustment	Vertical : ±15 mm ($\pm\frac{19}{32}$ ") Horizontal : ±10 mm ($\pm\frac{3}{8}$ ")
Ink Supply	Full automatic (1000 ml per cartridge)
Master Supply/Disposal	Full automatic (approx. 215 sheets per roll)

Master Disposal Capacity	80 sheets
User Interface	LCD Touch Panel with Progress Arrow indicators, front-side operation
Optional Accessories	Auto Document Feeder AF-VI:II, Auto Document Feeder DX-1, Color Drum (Cylinder), Key Card Counter, Job Separator, RISO Network Card, Document Storage Card DM-128CF, RISO Controller IS300, RISO Stand D type (II), RISO Stand N type (II), Wide Stacking Tray, Cover Kit: Paper Feed/Ejection, Card Feed Kit, Envelope Feed Kit
Power Source	MZ1090U : 100-240V~, 50/60Hz <7.3/3.0A>
Dimensions	When in use : 1625 mm (W) × 735 mm (D) × 740 mm (H) (63 ³¹ / ₃₂ " (W) × 28 ¹⁵ / ₁₆ " (D) × 29 ¹ / ₈ " (H)) When in storage : 1005 mm (W) × 735 mm (D) × 740 mm (H) (39 ⁹ / ₁₆ " (W) × 28 ¹⁵ / ₁₆ " (D) × 29 ¹ / ₈ " (H))
Weight*1	Approx. 171 kg (376 ⁵ / ₈ lb)
Safety Standard	IEC-60950-1 compliant, Indoor, pollution degree 2*2, At altitudes of 2000m or lower

Note:

- Please note that due to improvements and changes to the machine, some images and explanations in this manual may not correspond to your machine.
- The specifications are subject to change without prior notice.

*1 The weight does not include Ink and Master.

*2 The pollution degree of the usage environment due to dirt and dust in the air. Degree "2" corresponds to a general indoor environment.

MEMO

CHAPTER 3: MAIN DRIVE SECTION

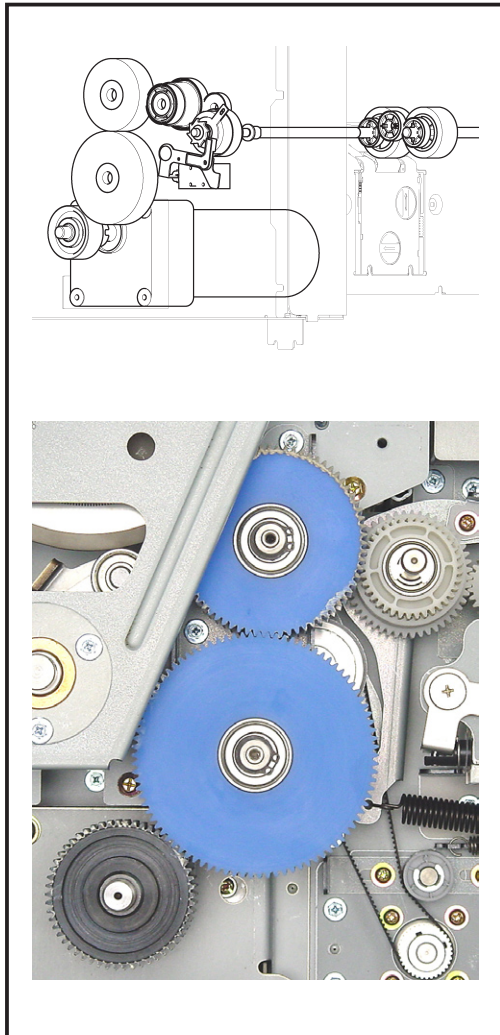
CONTENTS

Main Motor Belt Drive	3-2
B-Position of No. 1 Print Drum Air Pump Gear Assembly	3-3
Removing the Main Motor Assembly	3-4
Removing the Main Belt.....	3-7

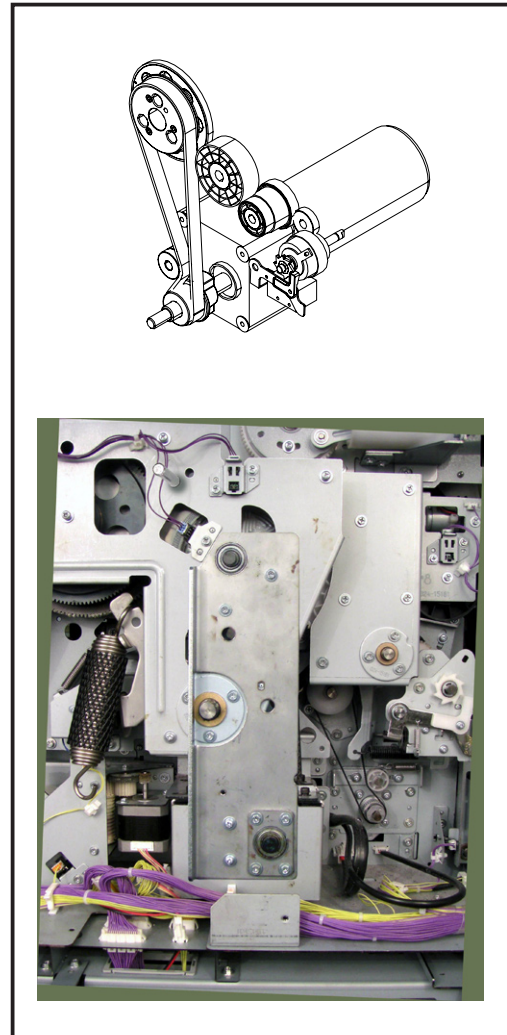
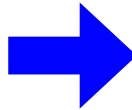
Main Motor Belt Drive

The Main motor drive is changed from Gear drive to Belt drive.

This is to reduce the noise during the printing.



Main motor Gear drive
on the existing MZ7 & MZ9 series.

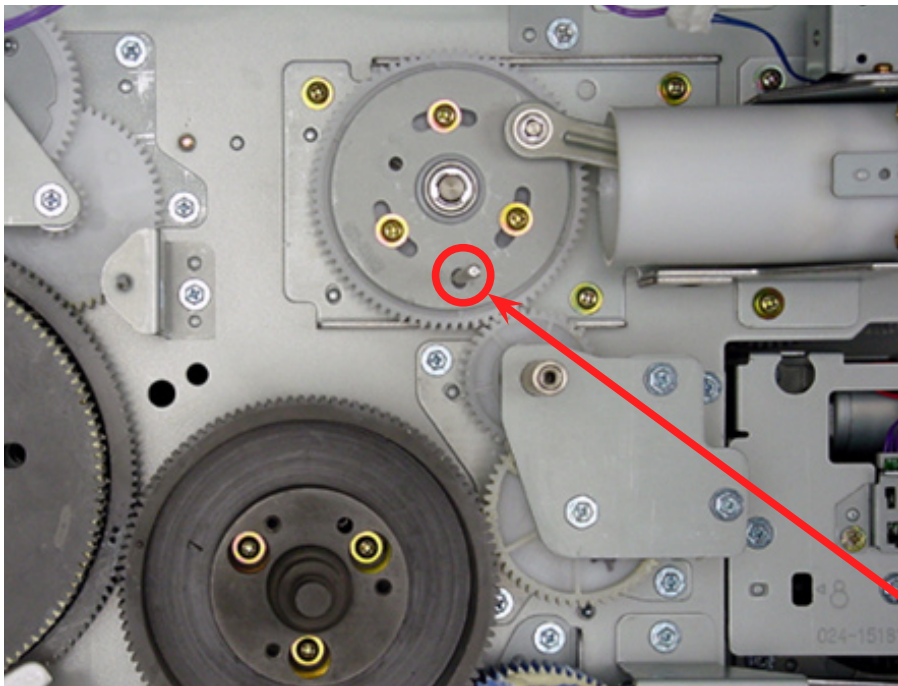


Main motor Belt drive
on the new MZ8 & MZ10 series.

B-Position of No. 1 Print Drum Air Pump Gear Assembly

The B-Position of the Air pump gear assembly for the N.1 Print drum is changed due to the modification on the Main motor drive transmission from existing Gear drive to Timing belt drive.

B-Position on the existing MZ7 & MZ9 series.

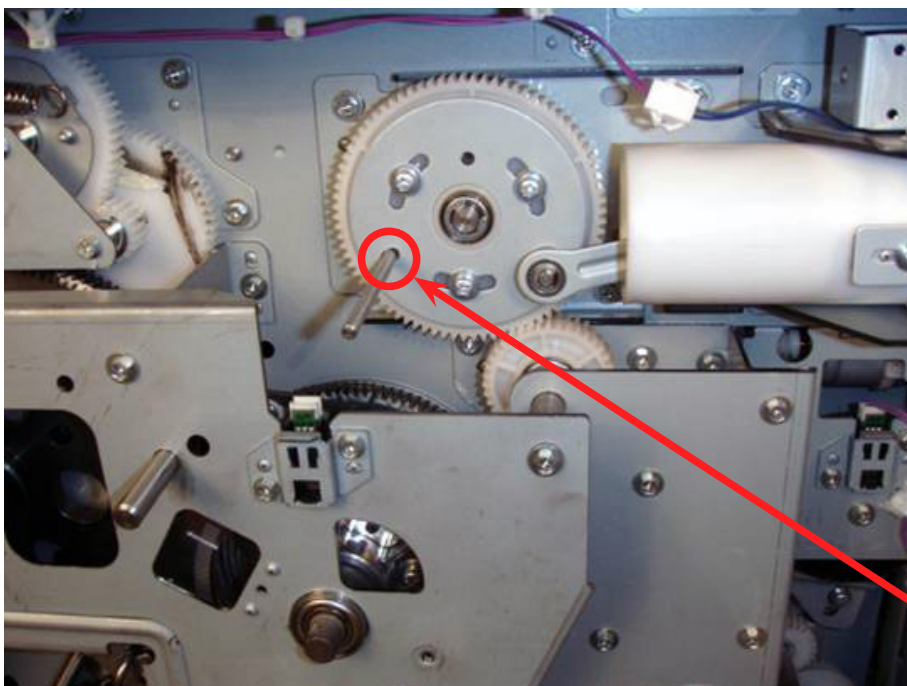


Existing MZ Models
< MZ7 & MZ9 >

4 mm diameter Jig shaft



B-Position on the new MZ8 & MZ10 series.



New MZ Models
< MZ 8 & MZ10 >

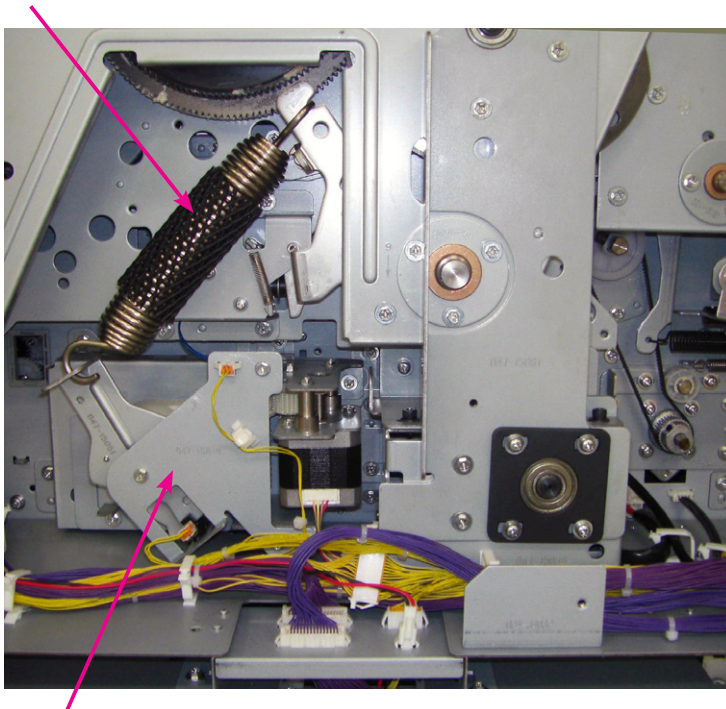
4 mm diameter Jig shaft

Removing the Main Motor Assembly

1. Turn OFF the machine power and disconnect the power cord from the machine.
2. Remove the rear left and rear right covers and open the Mechanical control PCB.
3. Remove the two Pressure springs, one for the No.1 Print drum and the other for the No.2 Print drum.
4. Remove the mounting screws (4 pcs) from the Pressure control unit and push the unit away to the left to make working space.

Pressure spring of Print drum No.1

Remove also that for Print drum No. 2

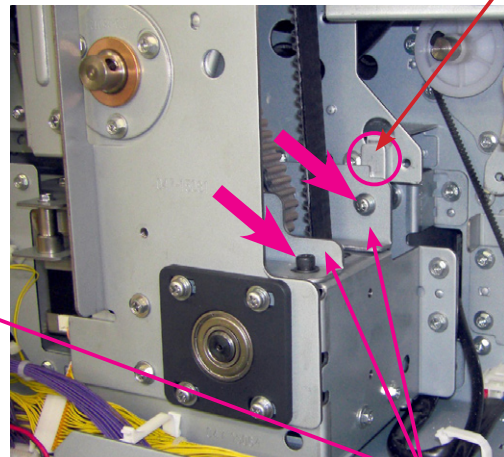
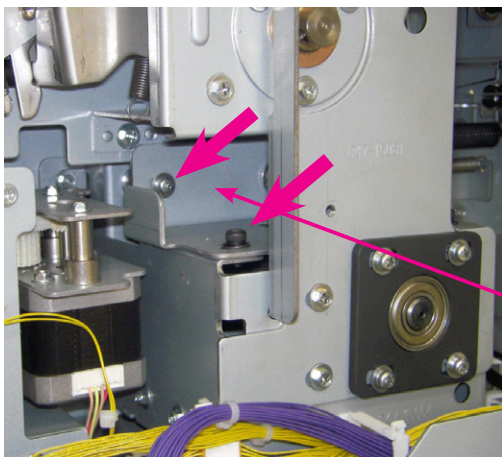


Pressure control unit

5. Remove the Main belt tensioner plate assembly. (2 screws & 2 cap screws)

Caution:

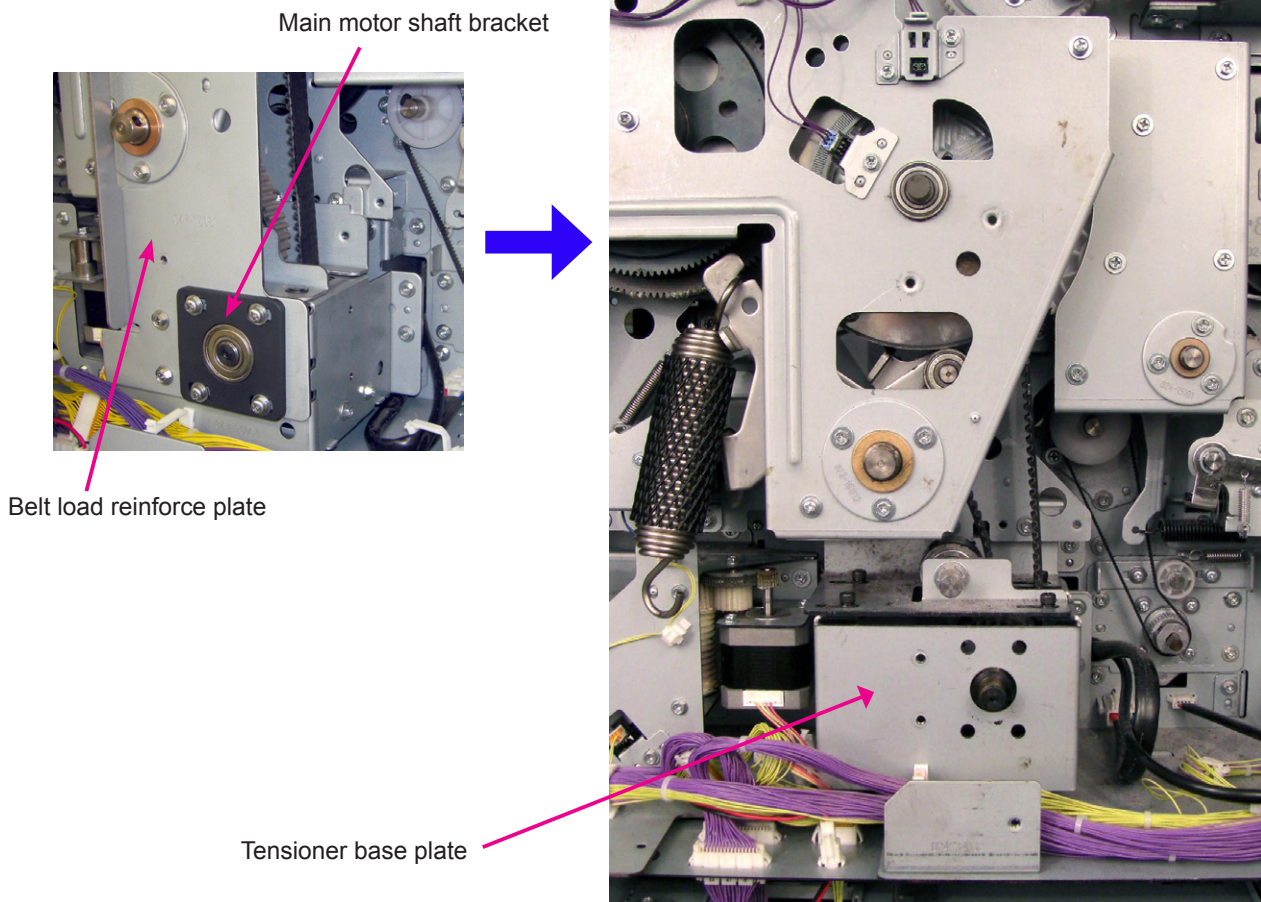
Before loosening the screws and cap screws, make sure to memo down the belt tension scale setting. The tension should be made a little tighter after the assembly.



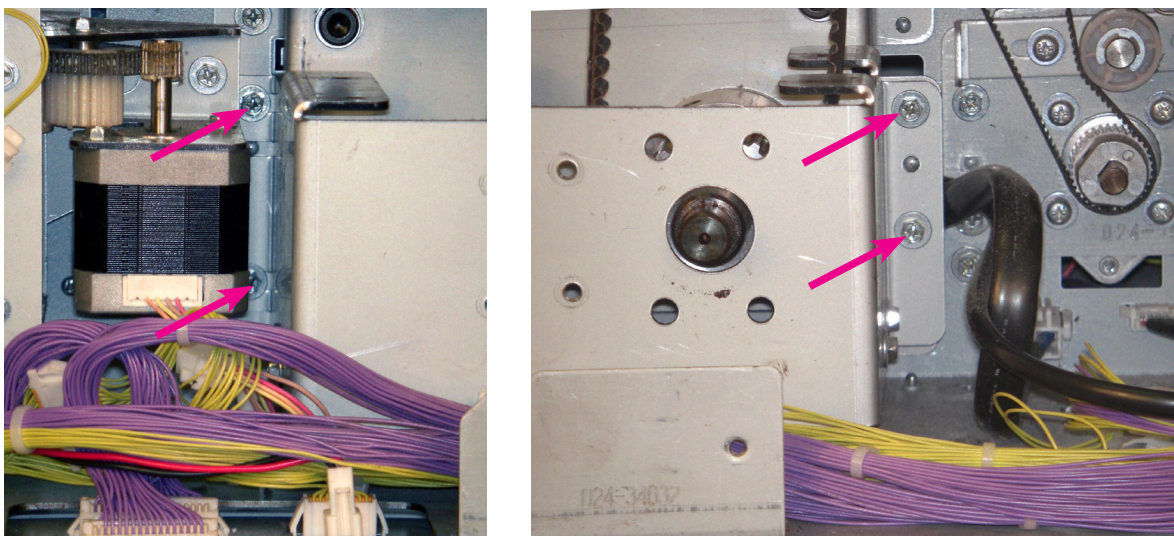
Main belt tensioner plate

6. Remove the Main motor shaft bracket. (4 screws)
7. Remove the Belt load reinforce plate. (4 screws)

View after the two parts shown on the left are removed.

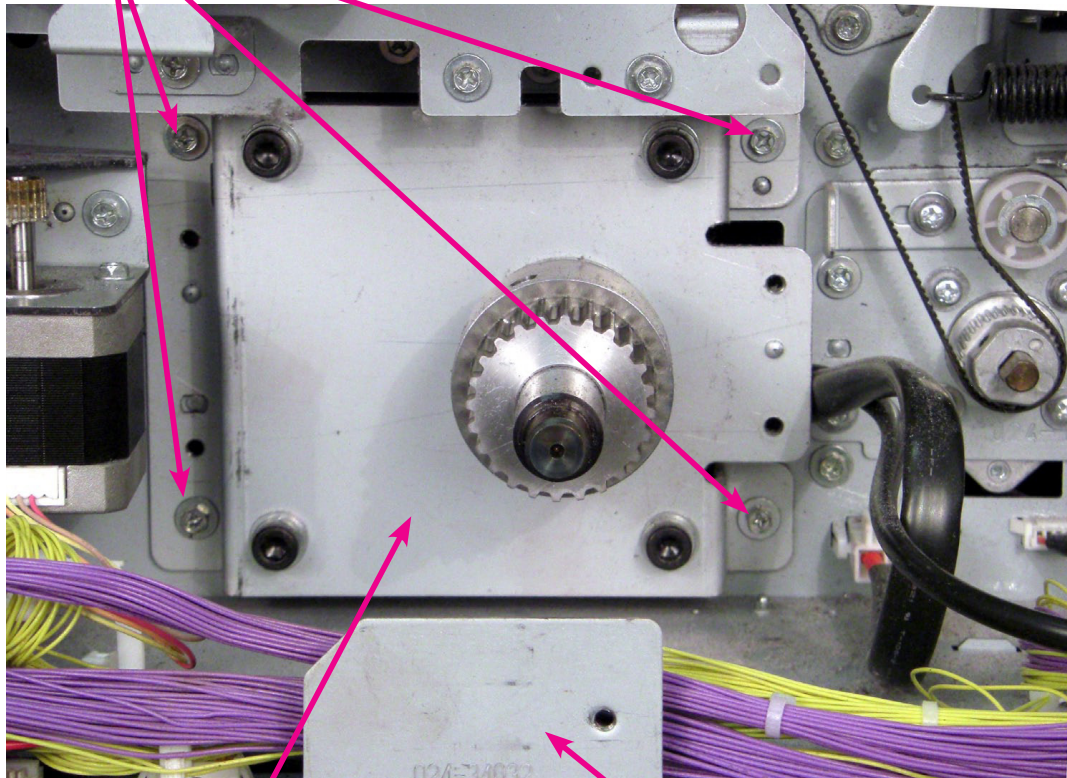


8. Remove the Tensioner base plate. (4 screws)



9. Remove the Rear cover mounting bracket. (2 screws)
10. Disconnect the connector and remove the Main motor assembly from the machine. (4 screws)

Mounting screws



Main motor assembly

Rear cover mounting bracket

Caution in assembly

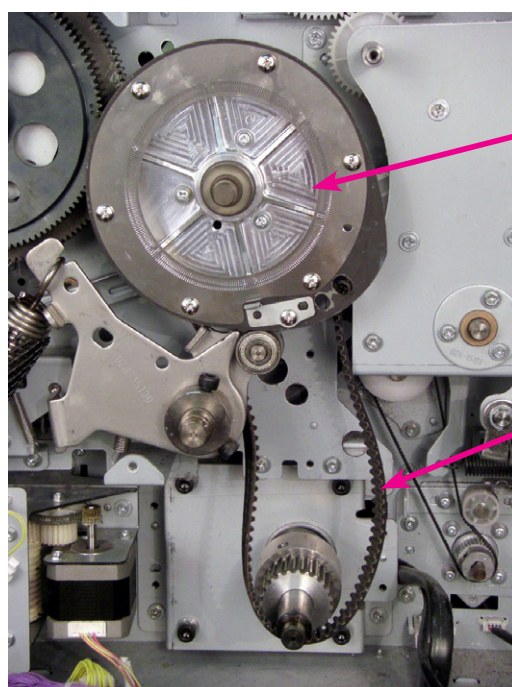
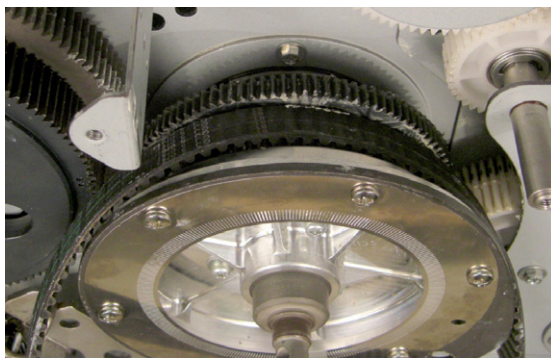
Main motor parameter acquisition test mode must be activated after the Main motor is replaced with a new one.

1. Start up the test mode and enter 9874 to access into the protected area test mode.
2. Insert both No.1 and No.2 Print drums in the machine.
3. Run test mode No.1105 (Main motor parameter acquisition)
The Print drums will rotate and the machine acquires the parameter automatically.
4. The operation panel displays END when the test mode is completed.

Removing the Main Belt

< Following steps No.1 through No.8 are the steps taken in removing the Main motor assembly.>

1. Turn OFF the machine power and disconnect the power cord from the machine.
 2. Remove the rear left and rear right covers and open the Mechanical control PCB.
 3. Remove the two Pressure springs, one for the No.1 Print drum and the other for the No.2 Print drum.
 4. Remove the mounting screws (4 pcs) from the Pressure control unit and push the unit away to the left to make working space.
 5. Remove the Main belt tensioner plate assembly. (2 screws & 2 cap screws)
- Caution:**
Before loosening the screws and cap screws, make sure to memo down the belt tension scale setting.
The tension should be made a little tighter after the assembly.
6. Remove the Main motor shaft bracket. (4 screws)
 7. Remove the Belt load reinforce plate. (4 screws)
 8. Remove the Tensioner base plate. (4 screws)
 9. Remove the Main cover. (7 screws)
 10. Remove the Pressure cam assembly for the No.1 Print drum. (3 screws)
 11. Remove the Main belt.



Pressure cam assembly

Main belt

MEMO

CHAPTER 4: FIRST PAPER FEED SECTION

CONTENTS

Initial Paper Feed Operation.....4-2

Initial Paper Feed Operation

At the start of a print job, the main motor switches ON and rotates the print drum via Timing belt and drives the Print drum pulley.

The paper feed clutch gear rotates continuously when the main motor is ON.

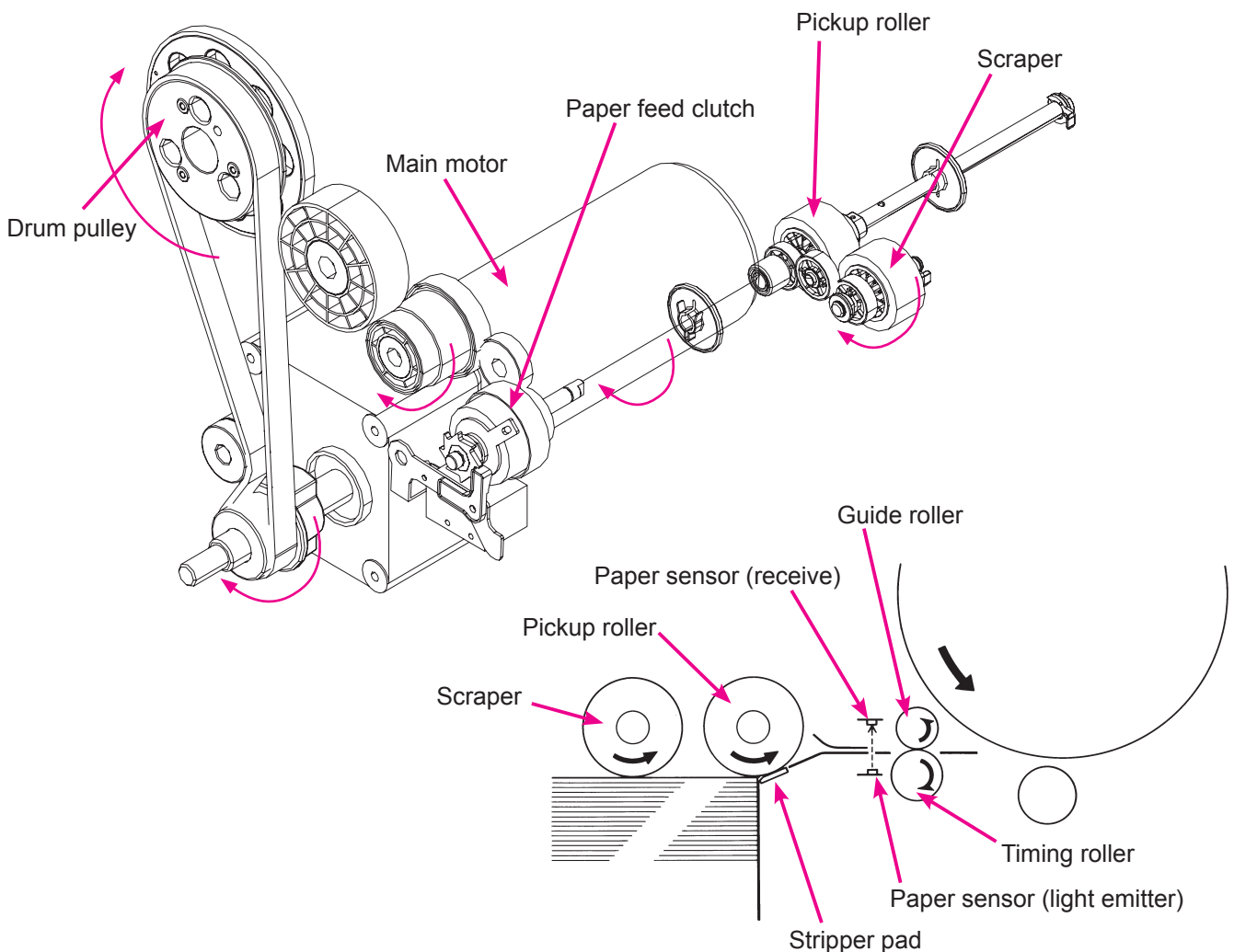
When the print drum rotates from position-B to a certain angle (angle set by adjusting the paper feed clutch ON angle during test mode or by the custom paper feed ON timing), the paper feed clutch switches ON, turning the scraper and pickup roller and transporting paper from the paper feed tray into the machine.

When the print drum rotates through a certain angle (angle set by adjusting the paper feed clutch OFF angle in test mode or by the amount of slack set during custom paper feed adjustment) after the paper is fed into the machine and the paper sensor senses light, the paper feed clutch switches OFF, and the first paper feed operation stops.

In this process, the leading edge of the paper contacts the guide roller and timing roller. When paper transport stops, some slack is left in the paper.

Additionally, when the print drum rotates to the paper feed jam detection angle/IN angle after the paper feed clutch switches ON, the machine polls the paper sensor for a paper failure feed error.

The scraper and pickup roller are equipped with a one-way clutch to enable free rotation and to keep the first paper feed section from halting or slowing paper feeding after the paper is fed to the second paper feed section.



CHAPTER 5: SECOND PAPER FEED SECTION

CONTENTS

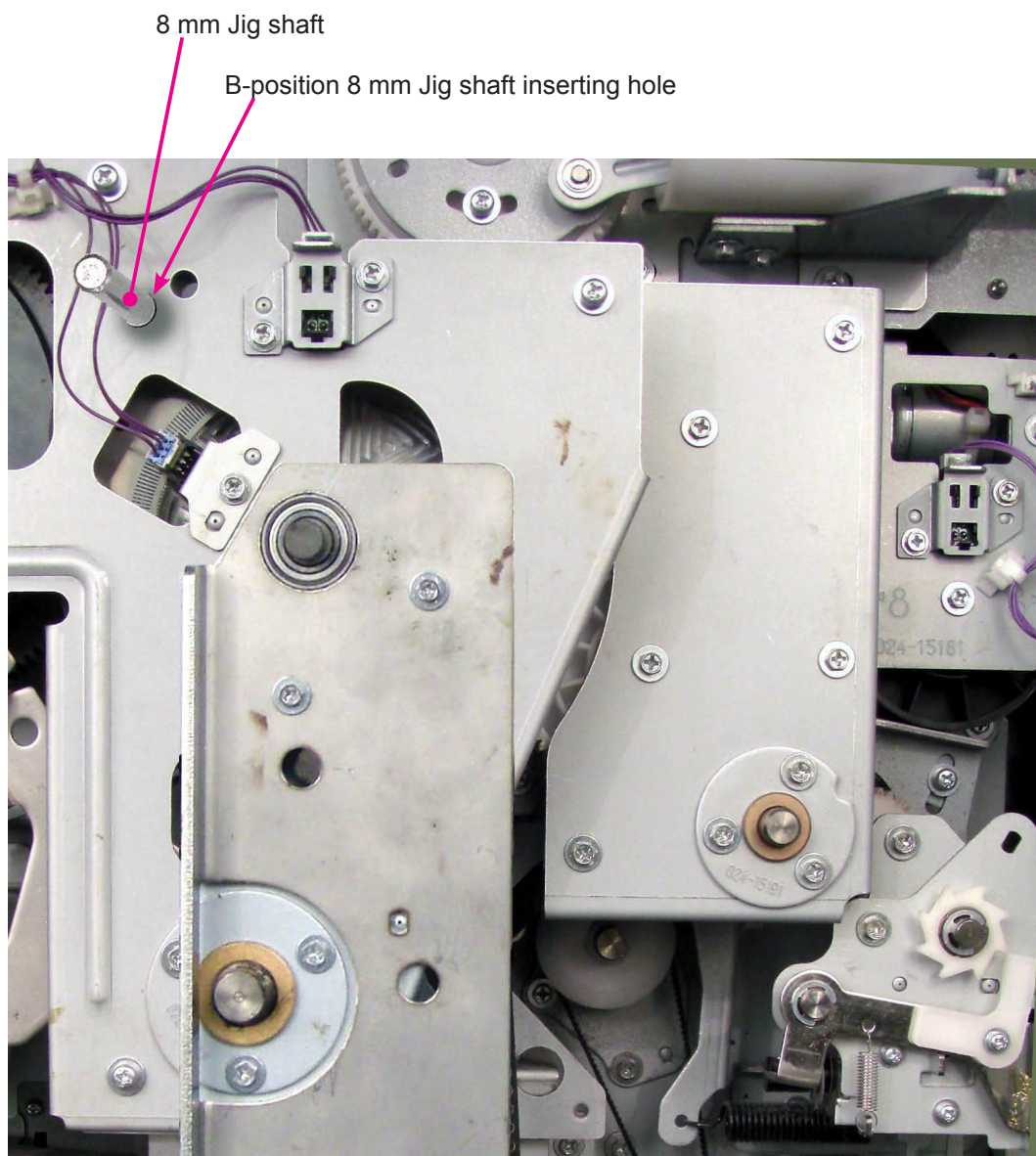
Removing the Timing Roller.....5-2

Removing the Timing Roller

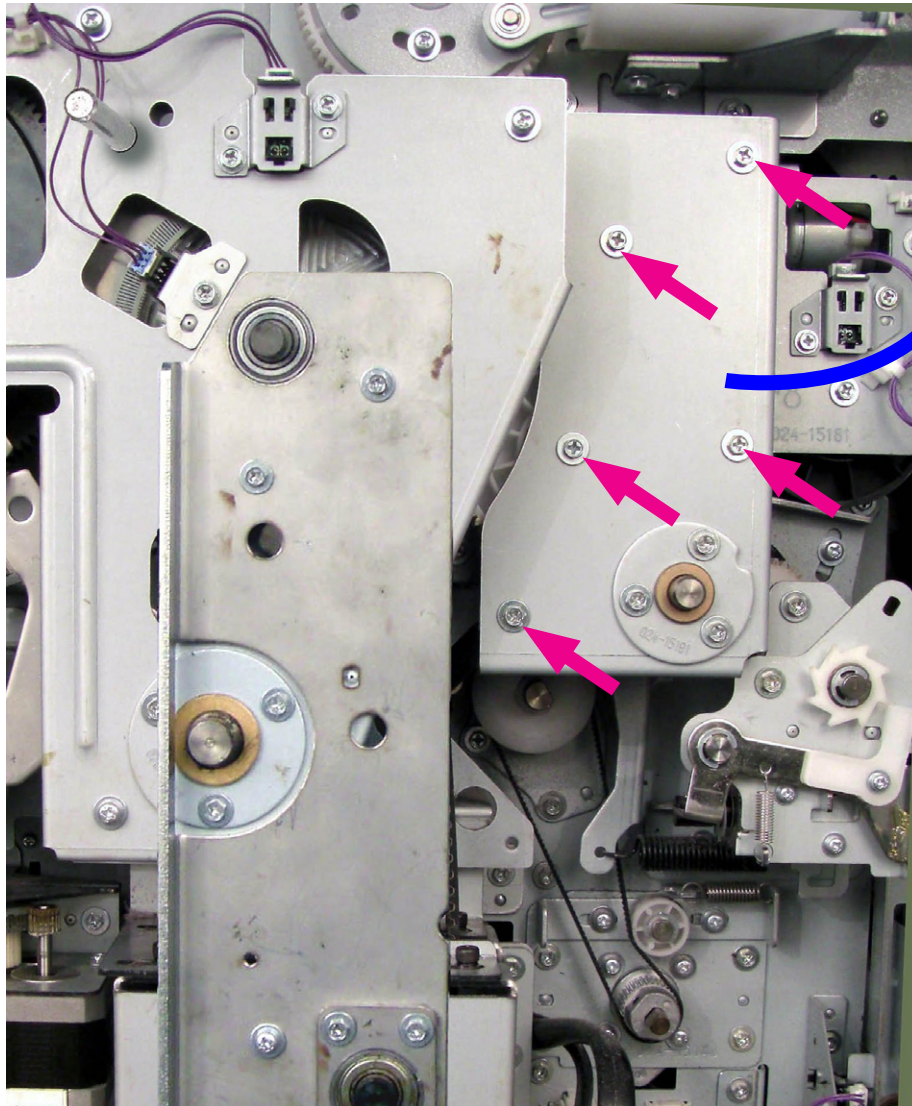
1. Remove Print drum No.1, turn OFF the machine power and disconnect the Power cable from the machine.
2. Remove the rear left and rear right covers and open the Mechanical control PCB.
3. Remove the Paper sensor (send).
4. Insert 8 mm Jig shaft through the Main cover, Pressure cam and machine frame on the Print drum No.1 side.

IMPORTANT !

This is to **prevent injury** from the sudden movements of the gears when working on the drive area, especially when the Pressure springs are hooked on the Pressure lever assembly.

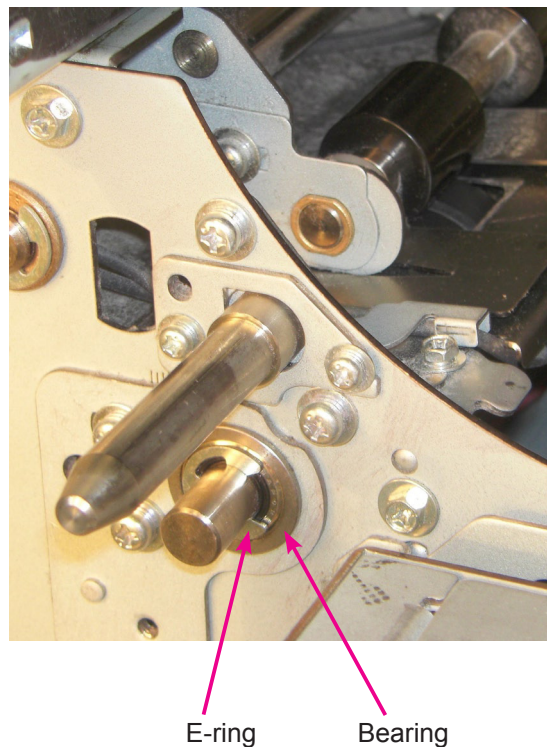
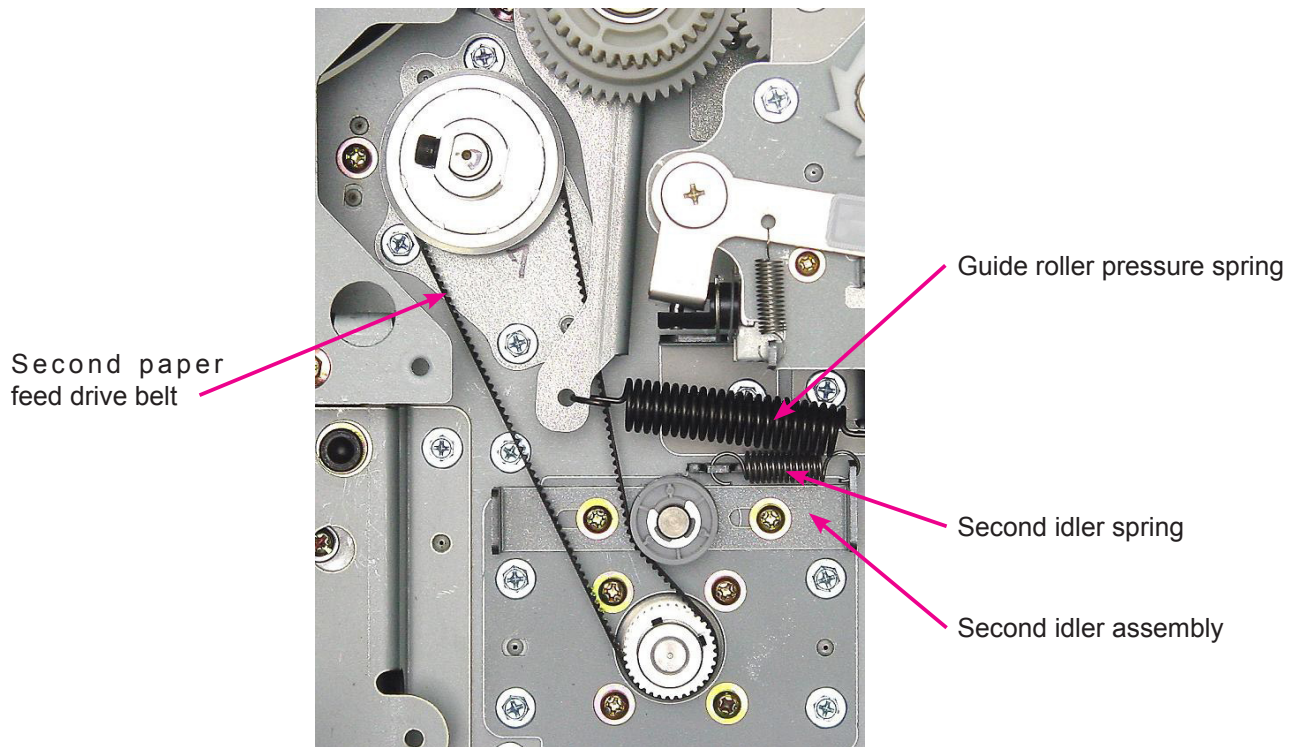


5. Remove the 5 mounting screws of the Air pump drive cover for the Print drum No.1, pull the Air pump drive cover and swing the cover to the right, as shown on the photograph below, to access to the second paper feed drive area.

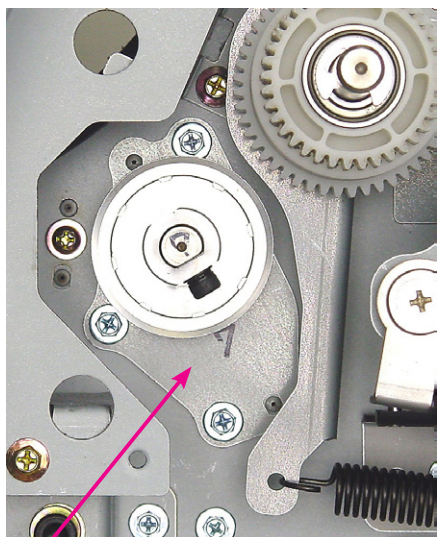


Swing the Cover
to the right.

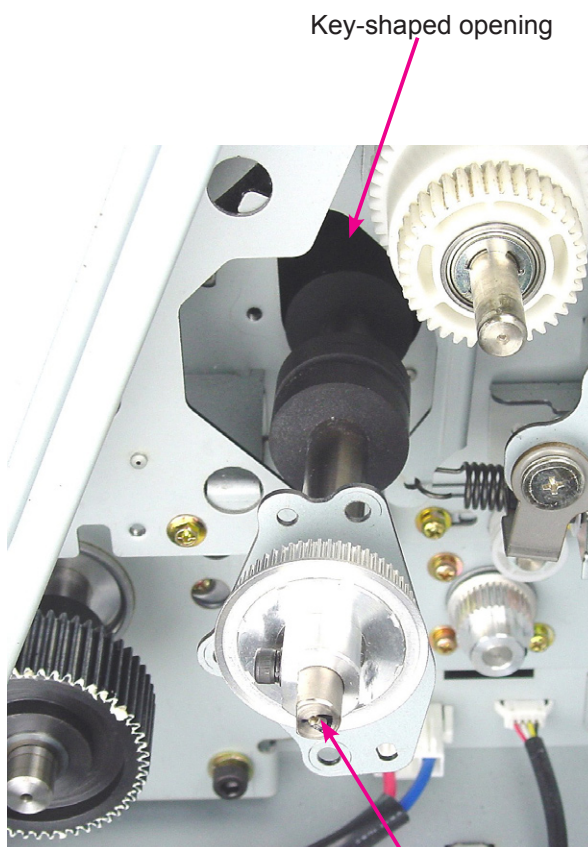
6. Remove the second idler spring, loosen the two mounting screws, slide the second idler assembly, then loosen the tension of the second paper feed drive belt and remove the second paper feed drive belt.
7. Remove the E-ring and bearing on the front side.



8. Remove the T-roller bracket mounting screws (3 screws) and pull the timing roller towards the front through the larger end of the keyhole-shaped opening in the machine frame.



T-roller bracket



Timing roller



< Timing Roller >

MEMO

CHAPTER 11: MASTER REMOVAL SECTION

CONTENTS

Master Disposal Box	11-2
---------------------------	------

Master Disposal Box

The Master disposal unit is changed to that of EZ type.

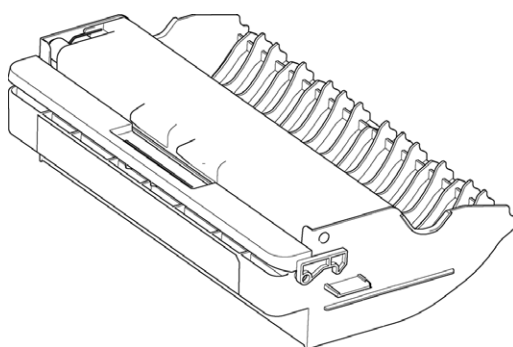
Small parts on the Master disposal box is different from the EZ unit, so as a unit, the Master disposal box on MZ8 & MZ10 Series differs from that of EZ machine.

With the change on the Master disposal box, the Master disposal box is changed to that of EZ type.

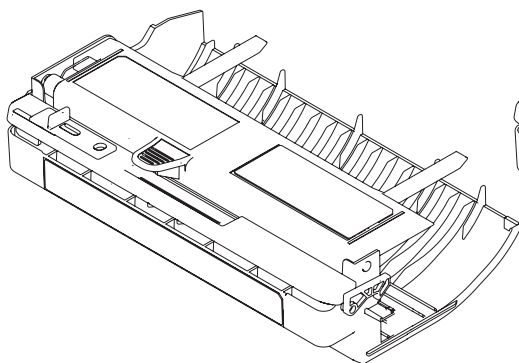
The No.1 Print drum master disposal box is identical to the EZ.

The No.2 Print drum master disposal box is also EZ type, but is new, as the master throw away direction is opposite from the No.1 print drum master disposal box.

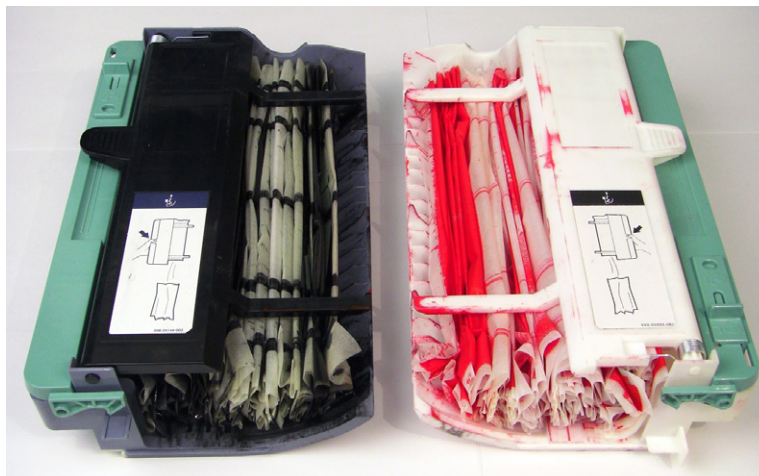
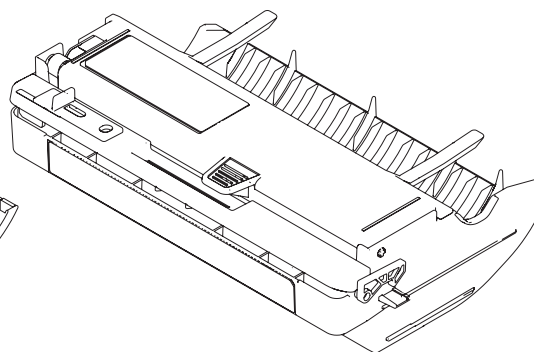
Existing MZ7 & MZ9 Series Master disposal box.



**New MZ8 & MZ10
No.1 Drum master disposal box**



**New MZ8 & MZ10
No.2 Drum master disposal box**



CHAPTER 14: MASTER MAKING SECTION

CONTENTS

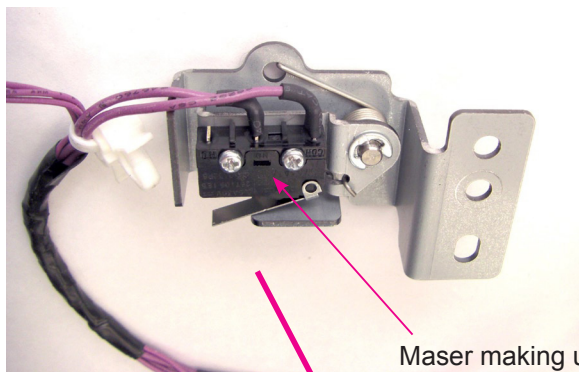
Removing the Master Making Upper Cover Safety Switch.....	14-2
Removing the Master Positioning Sensor	14-3

Removing the Master Making Upper Cover Safety Switch

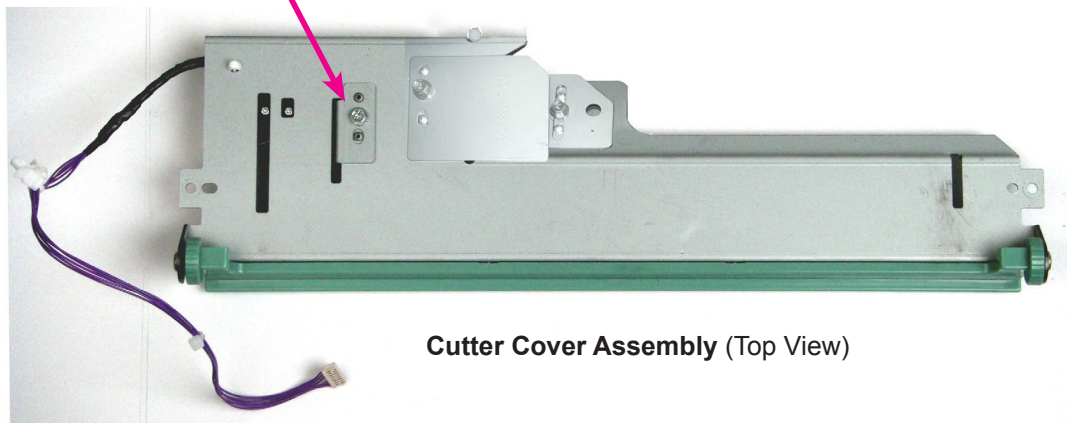
Master making unit upper cover set sensor, located on the Cutter cover assembly is changed from an interrupt sensor to a Micro switch, as it is on the EZ machines.

Removal Procedure

1. Pull out the Master making unit from the machine, turn OFF the machine power and disconnect the power cord from the machine.
2. Open the Master making upper unit and remove the Cutter cover assembly.
3. Disconnect the connector and remove the Master making upper cover safety switch together with the switch bracket. (1 screw)



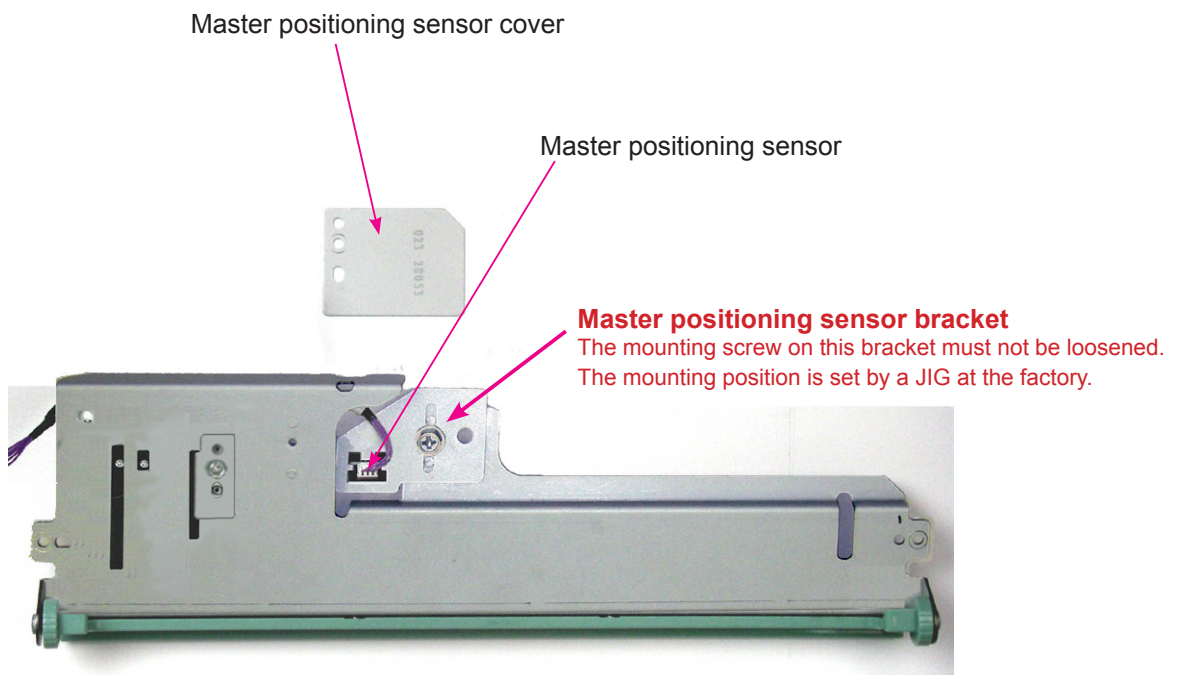
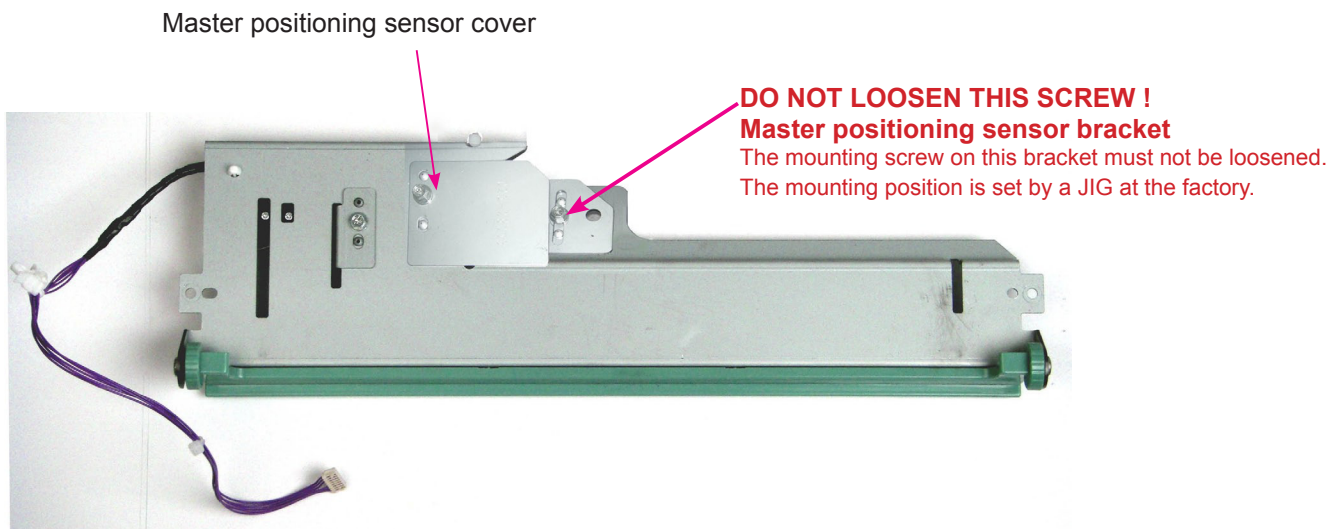
Master making unit upper cover safety switch



Cutter Cover Assembly (Top View)

Removing the Master Positioning Sensor

1. Pull out the Master making unit from the machine, turn OFF the machine power and disconnect the power cord from the machine.
2. Open the Master making upper unit and remove the Cutter cover assembly.
3. Remove the Master positioning sensor cover. (1 screw)
4. Disconnect the connector, and remove the Master positioning sensor.



MEMO

CHAPTER 15: TEST MODE

CONTENTS

1. Operating Method	15-3
1) Launching Test Mode	15-3
2) Operation	15-3
3) Ending Test Mode	15-3
2. Testing Methods	15-4
1) Sensor/switch check	15-4
2) Motor/solenoid check	15-4
3) Unit operation check	15-4
4) Data clear	15-4
5) Data check	15-4
6) Data set	15-4
3. System Panel Test Mode	15-5
4. Imaging/Scanning Test Mode	15-14
5. Master-making/Master-disposal Test Mode	15-18
6. Paper-feed/Paper-eject Test Mode	15-23
7. Print Drum/ Print Adjustment Test Mode	15-29
8. Protected Area Test Mode	15-38
9. Test Mode for Optional Unit (AF)	15-42
10. Test Mode for Optional Unit (Job Separator)	15-45
11. Test Mode for Optional Unit (Storage Memory)	15-46
12. Test Mode for Optional Unit (Linked Printer)	15-47

MEMO

1. Operating Method

1) Launching Test Mode

To start Test Mode, switch on power while simultaneously pressing the < ◀ > and < ▶ > keys for first print drum position adjustment on the operation panel. This sets the machine in Test Mode standby status.

2) Operation

A Test Mode No. can be entered (selected) via keys or by selecting from the menu.

a) Using keys

(1) When the machine is in standby status, enter a desired Test Mode No. using the ten-key pad. To correct input, press the < C > key and press the desired key.

(2) Press the Start key to start Test Mode operations.

(3) Press the Stop or Start key to exit Test Mode operations and to set the machine in non-operating or standby status.

* When parameters are being set, pressing the Start key after changing data registers the input data and sets the machine in standby status. Pressing the Stop key cancels the setting and places the machine in standby.

b) Selecting from the menu

(1) When the machine is in the standby status, select a unit from the Test Mode menu that includes the test item to be executed.

* Press with a finger on the name of a desired unit on the LCD screen. (This highlights the selected unit name.)

* The screen displays the Test Mode sub-menu.

(2) Select the test item to be executed from the Test Mode sub-menu.

* Press with a finger on Test Mode operations on the LCD screen. (This highlights the selected test name.)

(3) Press the Start key to start the Test Mode operations.

(4) Press the Stop or Start key to exit Test Mode and set the machine in non-operating or standby status.

* When parameters are being set, pressing the Start key after changing data registers the data and sets the machine in standby status. Pressing the Stop key cancels the setting and places the machine in standby.

3) Ending Test Mode

When the machine is in Test Mode standby status or in Test Mode non-operating status, depress the Reset key for 1 or more seconds to exit Test Mode.

2. Testing Methods

1) Sensor/switch check

The statuses of the sensors and switches are indicated by a buzzer.

- Detecting condition: The buzzer beeps at intervals of 0.1 seconds (quick successive beeps)
- Non-detecting condition: The buzzer beeps at intervals of 0.5 seconds (slightly-prolonged successive beeps)

2) Motor/solenoid check

Pressing the Start key switches the motor/solenoid ON. Pressing the Start or Stop keys halts the motor/solenoid.

- * Note that since error checks are not performed during operations, the moving section may become locked at a limit position if one is set.

3) Unit operation check

(1) Press the Start key to operate the unit. In general, ordinary error checks will be performed. Some units will stop after completing a series of operations, while others continue operating until a key (Stop key or Start key) is pressed.

(2) An error will result in a continuous buzzer sound. Press the Reset key to clear the error.

4) Data clear

Press the Start key to start the operation. The screen will display <In Action>. After a brief period during which this indication is displayed, the operation halts automatically, and the screen displays <End>.

5) Data check

Press the Start key to display settings and parameters.

- * Set values are displayed but cannot be changed during data check operation.

6) Data set

(1) Pressing the Start key to change the currently displayed settings and parameters.

(2) Change the data using the ten-key pad. Use the < * > key to switch between +/- indications.

(3) After changing a set value, press the Start key to register the data. The machine will enter standby status. Pressing the Stop key cancels the setting and places the machine in standby.

- * Entering a value outside the permissible range will return the setting to the default value. Entering a value incompatible with the setting unit will return the setting to the default value.

3. System Panel Test Mode

No.	Sensor/Switch	Detecting Condition	Print drum changeover
0001	Wake-up Key	The key pressed.	-
0002	Solenoid Counter Connection Signal	The solenoid counter is connected.	-
0003	24V A output signal	24V-A ON (there is a 24V output)	-
0004	24V B output signal	24V-B ON (there is a 24V output)	-
0005	Rear Cover Safety SW	Switch ON (main unit rear cover is installed)	-
No.	Motor/Solenoid	Remarks	Print drum changeover
0062	Wake-up LED	The LED illuminates.	-
No.	Unit Check		Print drum changeover
0080	Test Print A (Checkered)		A
	Creates a master with Test Pattern 1 (Checkered).		
0081	Test Print B (Crossed Lines)		A
	Creates a master with Test Pattern 2 (Crossed Lines).		
0082	Test Print C (Dot 1)		A
	Creates a master with Test Pattern 4 (Dot 1).		
0083	Test Print D (Dot 2)		A
	Creates a master with Test Pattern 5 (Dot 2).		
0084	Test Print E (Dot 1 + Crossed Lines)		A
	Creates a master with Test Pattern 6 (Dot 1 + Crossed Lines).		
0085	Test Print F (Dot 2 + Crossed Lines)		A
	Creates a master with Test Pattern 7 (Dot 2 + Crossed Lines).		
0086	Test Print G (Dot 3 + Crossed Lines)		A
	Creates a master with Test Pattern 8 (Dot 3 + Crossed Lines).		
0087	Paper-Feed Test (continuous feeding)		A
	Prints continuously. * The Speed key is enabled. * If the rear cover safety switch is OFF, the operation begins when the rear cover safety switch is turned ON within 10 seconds after the START key is turned ON.		
0088	Low-Speed Printing Operation		A
	Prints continuously at 15 rpm.		
0090	Machine Firmware Download		-
	Pressing the START Key starts the Firmware download.		
0094	Unit Initialization		-
	Returns mechanical moving units to their home positions. (scanner, thermal print head, compression plate, clamp units, vertical print position, printing pressure)		

(Note) Meaning of symbols used in the <Print drum changeover> column in the Test Mode chart.

A : <First print drum side>, <second print drum side>, or <both first and second print drums> can be selected.

B : <First print drum side> or <second print drum side> can be selected.

- : Irrelevant for print drum.

No.	Unit Check		Print drum changeover
0095	System Configuration Data Output		B
	Creates a master for CI system data.		
0097	System Parameter & Error Record Print		B
	Creates a master of the list of data setting changes and error history. * The master is created by the first print drum.		
0101	Machine Clock Activation		-
	Writes the time information set in Test No. 0171 to No. 0173 to the RTC and starts the time count. Pressing the Start key begins the operation and automatically stops it after 0.5 seconds.		
0102	DSP Download (Main, Secondary)		-
	Pressing the Start key begins download of the DSP program for controlling the main motor and second paper feed.		
0103	Machine Test-Mode Data Recording		-
	Stores the maine Test Mode setting in NeoROSA PCB into CF card. <Excludes the test modes for Duplex Scanner Unit TM2760-TM2999.>		
0104	Print Drum Test-Mode Data Recording		B
	Stores the print-drum Test Mode Settings now in the EEPROM of the Print Drum into CF card. <This test mode is not displayed on the Operation Panel.>		
0105	Machine Test-Mode Data Re-store		-
	Writes the test mode settings retrieved in CF card by test-mode No.0103 into the SH PCB.		
0106	Print Drum Test-Mode Data Re-store		B
	Writes the test mode settings retrieved in CF card by test-mode No.0104 into the Print Drum PCB EEPROM. <This test mode is not displayed on the Operation Panel.>		
0107	Test Mode Data Back-up		-
	Stores all the test mode numbers and settings, which are changed from the program default, are stored in CF card for record keeping purpose. <This test mode is not displayed on the Operation Panel.>		
No.	Data Clear	Details	Print drum changeover
0110	Clearing Jam Status Data	Normally, when a paper jam occurs, the error can be cleared only by following the jam reset procedure and removing the cause of the jam. However, this setting will force an error caused by jamming to be cleared. Note that errors involving consumables cannot be cleared.	-
0111	Clearing User Memory	Clears data (memory function, programs, properties settings, etc.) in the user area (data returned to default values). * Be sure to record all data before executing this function. * Data relating to Authentication settings cannot be cleared <TM118 needs to be used.>	-
0112	Clearing Normal Area Test-Mode Data Memory (Machine)	Returns all settings stored in the main unit FRAM and main unit EEPROM in the Test Mode to their default values. <This test mode is not displayed on the Operation Panel.> * Does not clear data in protected areas. * Be sure to record all data before executing this function.	-

No.	Data Clear	Details	Print drum changeover
0113	Maintenance Count Clear (master making)	Resets the maintenance master counter in maintenance call message.	-
0114	Maintenance Count Clear (printing)	Resets the maintenance copy counter in maintenance call message.	-
0115	Maintenance Count Clear (print drum)	Resets the maintenance print-drum print counter in maintenance call message.	B
0116	Setup Wizard Initialize	Initializes the user business type setting, basic screen setting, and mode transition system selection. (There is no need to reset the clock.)	-
0117	Clearing Normal Area Test-Mode Data Memory (Print Drum)	Returns all settings stored in the print drum EEPROM in the Test Mode to their default values. * Does not clear data in protected areas. * Be sure to record all the data before executing this function.	B
No.	Data Check	Content of Display	Print drum changeover
0120	System Parameter Adjustment Record	Displays a list of Test Mode Nos. and settings for non-default items in the values set. * Items with Nos. from 1200 to 1299, and 5480 to 5484 are not displayed.	-
0121	SW Action Record	Displays the error codes (D**) for the switches causing operation shutdown. * Displays the 64 most recent error codes.	-
0122	Error Record	Displays a list of error codes for errors (error type: T, A, B) previously generated in normal mode. * Displays the 64 most recent error codes.	-
0123	Maintenance Count	Displays the values for all maintenance counters.	-
0126	Optional Configuration Check	Displays a list of all connected peripherals or optional equipment.	-
0132	Downloading File Information	Displays the following: File name, Firmware type, Firmware version number, File date, Media type (U=USB, C=CF card).	-

No.	Data Check		Content of Display		Print drum changeover
0135	Paper size on feed tray is displayed by ID numbers.		Identifies and displays a paper ID determined based on information from the paper width potentiometer and paper size detection sensor. * Paper IDs and paper sizes		-
			00: No paper 01: A3 03: A4 05: B5 07: A5 09: B6 11: Postcard 13: Ledger 15: Letter	02: B4 04: A4 landscape 06: B5 landscape 08: A5 landscape 10: B6 landscape 12: Postcard landscape 14: Legal 16: Letter landscape	
			17: Statement 18: Statement landscape 19: Foolscap 30: Chinese paper K16 31: Chinese paper K16 Landscape 32: Chinese paper K8 50: Paper size undefined 1 (paper size detection sensor: ON) 51: Paper size undefined 2 (paper size detection sensor: OFF)		
No.	Data Setting				Print drum changeover
0141	Counter Display Control				-
	Description	Selection to display or not display the counter.			
	Setting	Setting range: 0: (Not displayed) 1: (Displayed) - default.			
0142	Test Mode Language				-
	Description	Selects the language for the Test Mode display.			
	Setting	Setting range: 0: (Normal) 1: (Japanese) 2: (English) 3: (Chinese). Default: 0: (Normal)			
0143	Maintenance-Master Count Entry				-
	Description	Sets the number of masters at which the maintenance call message is displayed.			
	Setting	Setting range: 0 to 9999 (x 100) masters Setting unit: 1 (x 100) masters Default: 0 master <does not display maintenance call message>.			
0144	Maintenance-Copy Count Entry				-
	Description	Sets the number of prints at which the maintenance call message is displayed.			
	Setting	Setting range: 0 to 9999 (x 1000) sheets Setting unit: 1 (x 1000) sheets Default: 0 sheet <does not display maintenance call message>.			
0145	Maintenance-Drum Meter Entry				B
	Description	Sets the number of print-drum pressurizing times at which the maintenance call message is displayed (data stored in print drum PCB).			
	Setting	Setting range: 0 to 9999 (x 1000) sheets Setting unit: 1 (x 1000) sheets Default: 0 sheet <does not display maintenance call message>.			

No.	Data Setting		Print drum changeover
0146	Scan First		-
	Description	Selects whether scanning is done before master-removal, or do the scanning and master-removal at the same time.	
	Setting	Setting range: 0 (Inactive - both done at the same time) - default 1 (Active - scanning is done before master-making)	
0149	Authentication Enable/Disable Selection		-
	Description	Selects whether to enable or disable the authentication function. <This test mode is not displayed on the Operation Panel.>	
	Setting	Setting range: 0 (Disable) 1 (Enable) - default.	
0150	Print Quantity Reset Setting		-
	Description	Sets whether the print count value is reset or not when continuous print is set to OFF.	
	Setting	Setting range: 0 (Reset disabled), 1 (Reset enabled) Default: 0 (Reset disabled)	
0151	Print Speed After Short Interval		-
	Description	Enables/disables the gradual print speed acceleration operation.	
	Setting	Setting range: 0 (Disabled), 1 (Enabled) Default: 0 (Disabled)	
0152	Lighten Print Display Selection [Only on MZ9/MV9 Series]		-
	Description	Enables/disables the Lighten Print display in the Function tab.	
	Setting	Setting range: 0 (Hide), 1 (Display) Default: 0 (Hide)	
0153	Special Paper Control Basic Display Selection		-
	Description	Selects whether to display the Special Paper Control button in the Admin. Tab.	
	Setting	Setting range: 0 (Hide), 1 (Display) Default: 0 (Hide)	
0154	Minimum Print Quantity Control		-
	Description	Enables/disables the Minimum Print Quantity setting in the Admin. tab.	
	Setting	Setting range: 0 (Setting change disabled), 1 (Setting change enabled) Default: 0 (Setting change enabled)	

No.	Data setting		Print drum changeover
0155	Counter Action Control		—
	Description	Enables/disables the counters (solenoid counter, software counter). This setting is effective until the power switch is turned OFF. Once the power switch is turned OFF, the setting returns to default (enabled).	
	Setting	Setting range: 0 (Disabled), 1 (Enabled) Default: 1 (Enabled)	
0159	<Warning> Display Control		—
	Description	Enables/disables the display of <wrong size> warning (F02, F10, F43) at the start of master-making or printing.	
	Setting	Setting range: 0 (Warning display disabled), 1 (Warning display enabled) Default: 1 (Warning display enabled)	
0160	Multi-Up Repeat Setting		—
	Description	Sets whether the Multi-Up repeat setting is turned OFF or automatically reset at the end of Multi-Up printing job.	
	Setting	Setting range: 0 (Off), 1 (Reset) Default: 0 (Off)	
0161	Program Printing (1 original) repeat setting.		—
	Description	Enables/disables the reset of the Program Printing when the Auto Printing setting is turned OFF.	
	Setting	Setting range: 0 (Reset disabled), 1 (Reset enabled) Default: 0 (Reset disabled)	
0162	Master-Making stand-by time adjustment		—
	Description	Sets the stand-by time of the master-making in which the initial movement does not take place.	
	Setting	Setting range: 0 (No stand-by), 1 to 180 (1 second to 180 seconds) Default: 180 (180 seconds)	
0165	RLP Mode Switch Timing Control		—
	Description	Adjusts screen switching time in RLP automatic allocation.	
	Setting	Setting range: -5 to +5 (0 to 2.5 sec) Setting unit: 1 (0.25 sec) Default: 0 (1.25 sec)	
0166	Max. Print Quantity Control		—
	Description	Enables/disables the maximum print quantity setting; sets maximum print quantity.	
	Setting	Setting range: 0 to 9999 (0 to 9999 sheets) Setting unit: 1 (1 sheet) Default: 0 (0 sheet) Maximum quantity restriction not set	
0167	Paper ID Auto-Repeat Control		—
	Description	Selects whether the paper size setting reverts to the default setting or the previous setting is maintained when the power is turned ON or the all-reset operation is initiated.	
	Setting	Setting range: 0 (Paper size setting is maintained.) 1 (Paper size setting reverts to default value.)	
		Default: 0 (Paper size setting is maintained.)	

No.	Data setting			Print drum changeover
0168	Fine Adjustment Button Display Control			—
	Description	Used to display or hide the fine adjustment button.		
	Setting	Setting range:	0 (Hidden) 1 (Display)	
		Default: 0 (Hidden)		
0169	<Properties> Tab Display Control			—
	Description	Display or hide the properties setting tab.		
	Setting	Setting range:	0 (Hidden) 1 (Display)	
		Default: 1 (Display)		
0170	Stock Management			—
	Description	Display or hide the Stock Management display in Admin. Tab.		
	Setting	Setting range:	0 (Hide) 1 (Display)	
		Default: 0 (Hide)		
0171	Machine Clock Setting (YEAR)			—
	Sets the <year> in the <year/month/date> setting in the RTC. * Test Mode No. 0101 must be activated after values are entered in Test Mode No. 0171 through No. 0173. Executing Test No. 0101 registers the values set in			
	Setting	Setting range: 2000 to 2199 (Year 2000 to 2199) Setting unit: 1 (1 year)		
		Default:	2000 before RTC is set (before Test No. 0101 is executed). RTC measured value at the time of test activation after RTC is set (after Test No. 0101 is executed).	
0172	Machine Clock Setting (MONTH & DATE)			—
	Sets the <month/date> in the <year/month/date> setting in the RTC. * Test Mode No. 0101 must be activated after values are entered in Test Mode No. 0171 through No. 0173. Executing Test No. 0101 registers the values set in			
	Setting	0101 before RTC is set (before Test No. 0101 is executed) RTC measured value at the time of test activation after RTC is set (after Test No. 0101 is executed)		
		Default:	0101 before RTC is set (before Test No. 0101 is executed) RTC measured value at the time of test activation after RTC is set (after Test No. 0101 is executed)	
0173	Machine Clock Setting (HOUR & MINUTE)			—
	Sets <hour/minute> in the RTC. * Test Mode No. 0101 must be activated after values are entered in Test Mode No. 0171 through No. 0173. Executing Test No. 0101 registers the values set in Test Mode No. 0171 through No. 0173 into the RTC.			
	Setting	Setting range: Two upper digits: 00 to 23 (0 to 23 o'clock), two lower digits: 00 to 59 (00 to 59 minutes) Setting unit: 1		
		Default:	0000 before RTC is set (before Test No. 0101 is executed) RTC measured value at the time of test activation after RTC is set (after Test No. 0101 is executed)	

No.	Data setting			Print drum changeover
0174	Chinese Paper No.16 (Width data setting)			—
	Description	Sets paper width data.		
	Setting	Setting range: 191 to 199 (191mm to 199mm) Setting unit: 1 = 1mm		
		Default:	195 (195mm)	
0175	Chinese Paper No.8 (Width data setting)			—
	Description	Sets paper width data.		
	Setting	Setting range: 266 to 276 (266mm to 276mm) Setting unit: 1 = 1mm		
		Default:	271 (271mm)	
0176	Chinese Paper No.8 (Length data setting)			—
	Description	Sets paper length data.		
	Setting	Setting range: 385 to 395 (385mm to 395mm) Setting unit: 1 = 1mm		
		Default:	390 (390mm)	
0180	Proof Print Quantity Selection			—
	Description	Selects proof print quantity in two color printing		
	Setting	Setting range: 0 (1st proof print for No.1 drum & 2nd proof print for No.1 and No.2 overlapped). 1 (1st for No.1 drum, 2nd for No.2 drum & 3rd for No.1 and No.2 overlapped).		
		Default:	0 (1st proof print for No.1 drum & 2nd proof print for No.1 and No.2 overlapped).	
0181	Service Info. File Mail Control <This test mode is not available on China models.>			—
	Description	Enable or disables the service information mail sending. <NET-D;GII network card must be installed to enable.>		
	Setting	Setting range: 0 (Disable) 1 (Enable)		
		Default:	0 (Disable)	
0182	Supply Stock Mail Transfer (NET-D;GII)			—
	Description	Enable or disable the supply stock information by e-mail (NET-D;GII) <NET-D;GII network card must be installed to enable.>		
	Setting	Setting range: 0 (Disable) 1 (Enable)		
		Default:	0 (Disable)	
0183	Count Charge Display Selection			—
	Description	Selects whether to display the [COUNT CHARGE] button on the User Mode display.		
	Setting	Setting range: 0 (Disable) 1 (Enable) Default: 0 (Disable)		

No.	Data setting			Print drum changeover
0184	Count Charge Mail Transmit Date Selection			—
	Description	Sets the Warning display date to indicate the Count Charge information mail sending.		
	Setting	Setting range: 0 to 31 (191mm to 199mm) Setting unit: 1 = First date of each month		
		Default:	0 <No warning display.> If the date selected is 29, 30 or 31, and if particular month does not include the selected date, the warning appears on the last day of the month.	
0185	Counter Info Mail Setting <Not available on the China model>			—
	Description	Selects whether to enable or disable the counter mail sending function. <ID Counter Report E-Mail Sending> Both this test mode and Test Mode No. 149 must be set to [1]. Net-D:G;G2 or RISO Network Card must be connected. [E-Mail] button will appear on the Count Display in the Functions Tab. <Counter Report E-Mail Sending> Both this test mode and Test Mode No. 183 must be set to [1]. Net-D:G;G2 or RISO Network Card must be connected. [Send Mail] button will appear on the Count Charge display in the Functions Tab.		
		Setting	Setting range: 0 (Disable) 1 (Enable)	
	Default:		0 (Disable)	
0186	Private MIB Function Setting (MIB = Management Information Base)			—
	Description	Selects whether to enable or disable the RISO Private MIB Function.		
	Setting	Setting range: 0 (Disable) 1 (Enable)		
		Default:	1 (Enable)	
0187	D to P Job Receiving Mode			—
	Description	Selection between Spool or Delete of the printing job when the Printer cannot receive the print job data via LAN or USB. When [0: Job Spool] is selected, the job stays even though the Printer cannot receive the data from PC. The print data is not deleted, but the PC may give time-out error, in which case some image may be lost in the printing when the Printer becomes able to receive the print job. When [1: Delete] is selected, the job is deleted when the Printer is unable to receive the data from PC. This prevents the possibility of lost image in the prints when the PC gives time-out error.		
		Setting	Setting range: 0 (Job Spool) 1 (Job Delete)	
	Default:		0 (Job Spool)	
0190	150 ppm Printing Speed Button			—
	Description	Selects whether to display the 150 ppm fast speed printing button.		
	Setting	Setting range: 0 (No Display) 1 (Display)		
		Default:	1 (Display)	
0199	Software Option Enable Control (Soft Digitizer)			—
	Description	The software option is enabled when the key code (8 digits) is entered and the Start key is pressed. [For Japanese Machines Only]		
	Setting	Setting range: 00000000 to 99999999 Setting unit: 1 Default: 00000000		

4. Imaging/Scanning Test Mode

No.	Sensor/Switch	Detecting Condition	Print drum changeover
0200	FB/AF Carriage HP sensor	The scanner is at the home position.	—
0201	Flatbed Original Det. Sensor	Light received (original present)	—
0202	Flat Bed Original Size Detection Sensor 1	Light received (original present)	—
0203	Flat Bed Original Size Detection Sensor 2	Light received (original present)	—
0204	Flat Bed Original Size Detection Sensor 3	Light received (original present)	—
0205	Flat Bed Original Size Detection Sensor 4	Light received (original present)	—
0206	Flat Bed Original Size Detection Sensor 5	Light received (original present)	—
0207	Flat Bed Original Size Detection Sensor 6	Light received (original present)	—
0208	Flat Bed Original Size Detection Sensor 7	Light received (original present)	—
0209	Compression plate open/shut sensor	The original stage cover is closed.	—
No.	Motor/solenoid	Remarks	Print drum changeover
0260	Scanner lamp	Switches scanner lamp ON/OFF.	—
No.	Unit check		Print drum changeover
0281	Carriage Home Action		—
	Returns the scanner to the home position.		
0284	Scanner Cycle Continuous Action		—
	Repeats the scanner operation (A3 scanning, ABC enabled).		
0287	Scanner Lamp Replace Positioning		—
	Moves the scanner to the lamp replacement position.		
0289	Scanner <Shipping> Positioning		—
	Moves the scanner to the machine transport position.		
No.	Data setting		Print drum changeover
0340	Line-Copy Slice Level Adjustment		—
	Description	Adjusts the slice level for text mode (scanning density 3).	
	Setting	Setting range: –16 to +16 Setting unit: 1 Default: 0 * (<+> for reduced density)	
0341	Auto Base Control (ABC) Slice Level Adjustment		—
	Description	Adjusts the slice level for text mode (auto scanning density).	
	Setting	Setting range: –16 to +16 Setting unit: 1 Default: 0 * (<+> for reduced density)	
0345	Photo/Duo Default Setting		—
	Description	Image processing selection when Photo or Duo is selected in master-making. Applies to both the master-making and printing to linked printer.	
	Setting	Setting range: 0 (Error-diffusion) 1 (Dot-screen 1) 2 (Dot-screen 2) 3 (Dot-screen 3) 4 (Dot-screen 4). Default: 0 (Error-diffusion)	
0350	Halftone Curve Selection (Photo)		—
	Description	Selects the matrix used as the basis for selecting halftone curves for photo mode.	
	Setting	Setting range: 0 to 8 Setting unit: 1 Default: 4	

No.	Data setting		Print drum changeover
0351	Halftone Curve Selection (Dot Photo)		—
	Description	Selects the matrix used as the basis for selecting halftone curves in photo & dot mode.	
	Setting	Setting range: 0 to 8 Setting unit: 1 Default: 4	
0352	Halftone Curve Selection (Duo)		—
	Description	Selects the matrix used as the basis for selecting halftone curves in Duo mode.	
	Setting	Setting range: 0 to 8 Setting unit: 1 Default: 4	
0353	Halftone Curve Selection (Dot Duo)		—
	Description	Selects the matrix used as the basis for selecting halftone curves in Duo & dot mode.	
	Setting	Setting range: 0 to 8 Setting unit: 1 Default: 4	
0359	Trimming Slice Level Adjustment		—
	Description	Sets the slice level for the trimming.	
	Setting	Setting range: -16 to +16 * (<+> for reduced density) Setting unit: 1 Default: -2	
0361	Edge Emphasis Weak Mode		—
	Description	In using recycled paper originals, this function reduces picking up the dark spots on the paper in scanning by reducing the edge emphasis.	
	Setting	Setting range: 0: Inactive 1: Active Default: 0: Inactive	
0362	Inside-border Paint Range Setting		—
	Description	Sets the number of dots on the inside of the area designating border which are included in the area specifying border for deletion from the master data in specified area separation. * Actual change takes place in the unit of <setting value x 8 dots>. Increasing this value increases the border area to be deleted.	
	Setting	0 (0 dot on the inside of border) 1 (1 dot on the inside of border) 2 (2 dots on the inside of border) 3 (3 dots on the inside of border) Default: 1 (1 dot on the inside of border)	

No.	Data setting		Print drum changeover
0363	Outside-border Paint Range Setting		—
	Description	Sets the number of dots on the outside of the area designating border which are included in the area specifying border for deletion from the master data in specified area separation. * Actual change takes place in the unit of <setting value x 8 dots>. Increasing this value increases the border area to be deleted. Sets the number of dots on the outside of the area designating border which are used as a separation border (range) in traced color separation. * Actual change takes place in the unit of <setting value x 8 dots>. Increasing this value broadens the border range (area to be separated).	
	Setting	Setting range: 0 (0 dot on the outside of border) 1 (1 dot on the outside of border) 2 (2 dots on the outside of border) 3 (3 dots on the outside of border) Default: 1 (1 dot on the outside of border)	
0368	Carriage Home Position Selection		—
	Description	Selects the Home Position of the Scanner Carriage. * If the setting is selected to [1], the quick-start-up becomes inactive.	
	Setting	Setting range: 0: HP 1: 2nd HP Default: 0: HP	
0380	FB Horizontal Scan Position Adjust		—
	Description	Adjusts the original horizontal scan position on the flatbed. A separate setting is required for AF.	
	Setting	Setting range: -30 to +30 (-3.0 mm to +3.0 mm) Setting unit: 5 (0.5 mm) Default: 0 mm *(<+> for adjustment left)	
0381	FB Scan Start Position Adjust		—
	Description	Adjusts the original scanning start position (amount of scan skip) on the flatbed.	
	Setting	Setting range: -40 to +40 (-4.0 mm to +4.0 mm) Setting unit: 1 (0.1 mm) Default: 0 mm *(<+> for adjustment up)	
0382	FB Scanning Speed Adjustment		—
	Description	Adjusts the original scanning speed on the flatbed. (Elongation/Shrinkage)	
	Setting	Setting range: -50 to +50 (-5.0 % to +5.0 %) Setting unit: 1 (0.1 %) Default: 0 % *(<+> to elongate)	
0386	Activates or deactivates center black dot setting		—
	Description	Adds a thin black line at the center of image data on the scanned image during printing in normal master-making and RLP output. * The thin center black line is added only when using image data scanned by the scanner. <Returns back to the default setting when power is turned off.>	
	Setting	Setting range: 0 (Without thin center black line) 1 (With thin center black line) Default: 0 (Without thin center black line)	
0389	Hand-written Color Separation Pen Extraction Lower-limit Density		—
	Description	Sets the pen extraction lower-limit density used in image processing for hand-written color separation.	
	Setting	Setting range: 0 to 255 Setting unit: 1 Default: 100 (Unspecified)	

No.	Data setting		Print drum changeover
0390	Hand-written Color Separation Pen Extraction Upper-limit Density		—
	Description	Sets the pen extraction upper-limit density used in image processing for hand-written color separation.	
	Setting	Setting range: 0 to 255 Setting unit: 1 Default: 220	
0391	Hand-written Color Separation (Ink) Pen Extraction Lower-limit Density		—
	Description	Sets the pen extraction lower-limit density used in image processing for hand-written color separation (ink).	
	Setting	Setting range: 0 to 255 Setting unit: 1 Default: 90	
0392	Hand-written Color Separation (Ink) Pen Extraction Upper-limit Density		—
	Description	Sets the pen extraction upper-limit density used in image processing for hand-written color separation (ink).	
	Setting	Setting range: 0 to 255 Setting unit: 1 Default: 180	
0393	Red-color Separation Pen Extraction Lower-limit Density		—
	Description	Sets the pen extraction lower-limit density used in image processing for red-color separation.	
	Setting	Setting range: 0 to 255 Setting unit: 1 Default: 100	
0394	Red-color Separation Pen Extraction Upper-limit Density		—
	Description	Sets the pen extraction upper-limit density used in image processing for red-color separation.	
	Setting	Setting range: 0 to 255 Setting unit: 1 Default: 220	
0395	Specified Area Separation Density Extraction Threshold (Lower-limit Value)		—
	Description	Sets the pen extraction lower-limit density used in image processing for specified area separation.	
	Setting	Setting range: 0 to 255 Setting unit: 1 Default: 125	
0396	Specified Area Separation Density Extraction Threshold (Upper-limit Value)		—
	Description	Sets the pen extraction upper-limit density used in image processing for specified area separation.	
	Setting	Setting range: 0 to 255 Setting unit: 1 Default: 220	
0397	Traced Color Separation Density Extraction Threshold (Lower-limit Value)		—
	Description	Sets the pen extraction lower-limit density used in image processing for traced color separation.	
	Setting	Setting range: 0 to 255 Setting unit: 1 Default: 100	
0398	Traced Color Separation Density Extraction Threshold (Upper-limit Value)		—
	Description	Sets the pen extraction upper-limit density used in image processing for traced color separation.	
	Setting	Setting range: 0 to 255 Setting unit: 1 Default: 255	
0399	Edge Emphasis Threshold Offset		—
	Description	Sets the offset for the following Test Mode setting value.	
	Setting	Setting range: -128 to 127 Setting unit: 1 Default: 0	

5. Master-making/Master-disposal Test Mode

No.	Sensor/switch	Detecting condition	Print drum changeover
0400	Master-positioning sensor	Light received (master detected)	—
0401	Master detection sensor	Light path blocked (master detected)	—
0402	Master end sensor	Light path blocked (master end mark detected)	—
0403	Cutter HP SW	Switch OFF (cutter at home position)	—
0406	TPH pressure sensor	Light path blocked (blocked by shield plate)	—
0407	Master-making-unit top cover safety switch	Switch ON (master making unit top cover closed)	—
0410	Master-making-unit releasing button	Switch ON (button depressed)	—
0411	Master-making Unit Position Sensor	Light path blocked (blocked by shield plate)	B
0412	Master-making Unit Pull-out Position Sensor	Light path blocked (blocked by shield plate)	—
0413	Master-making Unit Drawer Cover Safety Switch	Switch ON (master making unit cover closed) * The rear cover safety SW must be ON during this procedure.	—
0420	Master-disposal Jam Sensor	Light received (master detected)	B
0421	Master-compression HP Sensor	Light path blocked (master compression plate at home position)	B
0423	Master-disposal box safety SW	Switch ON (master disposal box set in machine) * For inspections of the first print drum side, the rear cover safety switch and the master-making unit drawer cover safety switch must be ON during this procedure. * For inspections of the second print drum side, the rear cover safety switch, the master-making unit drawer cover safety switch, and the first master disposal box safety switch must be ON during this procedure.	B
0424	Master disposal box set sensor	Light path blocked (disposal box is set in place)	B
0425	Master-compression motor FG sensor	Light path blocked (blocked by shield plate)	B
0426	Master-removal motor FG sensor	Light path blocked (blocked by shield plate)	B
No.	Motor/solenoid	Remarks	Print drum changeover
0460	Thermal-pressure motor (CW)	Rotates clockwise (CW).	—
0461	Thermal-pressure motor (CCW)	Rotates counterclockwise (CCW).	—
0462	Write pulse motor (CW)	Rotates clockwise (master feeding).	—
0463	Write pulse motor (CCW)	Rotates counterclockwise (master returning).	—
0464	Load pulse motor (CW)	Rotates clockwise (master feeding).	—
0465	Load Pulse Motor CCW (Reverse)	Rotates counterclockwise (master returning).	—
0466	Write pulse motor + Load pulse motor (CW)	Rotate both write pulse motor and load pulse motor in master-feed direction.	—
0467	Master-making-unit release button LED	The LED of the master-making unit release button illuminates.	—
0468	Master Stocker Fan	ON & OFF <Stop Key = OFF>	—
0470	Master removal motor (CW)	Rotates to feed master into the master disposal box.	B
No.	Unit check		Print drum changeover
0480	Cutter motor 1 cycle motion	Cuts the master.	—
0481	Thermal pressure motor action (TPH down)	Moves the TPH to the pressure application position.	—
0482	Thermal pressure motor action (TPH up)	Moves the thermal print head to the pressure-releasing position (i.e., moves it out of the way).	—
0483	Master-making Unit Positioning	Moves master-making unit to the master-making position on the first or second print drum side.	B
0484	Master-making Unit Pull-Out Position	Moves the master-making unit to the pull-out position.	—

No.	Unit check		Print drum changeover
0490	Master compression-plate home positioning		B
	Returns the compression plate to the home position.		
0491	Master compression-plate protection positioning		B
	Moves the master compression-plate to the Protection Mode position, when the Protection Mode is enabled.		
0493	Master compression-plate continuous movement		B
	Repeats the removed master compacting operation. A cycle consisting of compacting cycle action -> 3-second standby is repeated.		
0494	Cutter motor ON action (cut direction)		—
	Rotates the cutter motor in the cutting direction. (maximum time: 10 sec) Caution: Disconnect the Cutter motor from the machine before activating this test mode, or the machine will be damaged.		
No.	Data clear	Details	Print drum changeover
0510	Master removal software count clear	Resets the master removal software count. (Resets the count to 0)	B
No.	Data check	Content of display	Print drum changeover
0521	TPH thermistor temperature data	Displays the temperature value (Degrees Celsius) of the TPH thermistor.	—
0524	TPH power voltage	Displays the voltage (x 100) applied to the thermal print head immediately after power is supplied to the thermal print head. (Example: 1000 = 10V)	—
0527	Master usage start date	Displays the master start date (year/month/date) stored in the master tag. * For example, <2010/2/28> is displayed by alternating indications of <2010> and <0228>.	—
0528	Master removal software count	Displays the master removal software count.	B
No.	Data setting		Print drum changeover
0540	Master Front-End Position Adjust		—
	Description	Adjusts the distance of the slight return movement activated after the master positioning sensor switches OFF to perform the incremental movement required following the master cutting operation during master setting.	
	Setting	Setting range: 0 to +100 (0 mm to +10.0 mm) * (<+> for return direction) Setting unit: 1 (0.1 mm) Default: 50 (5.0 mm)	
0541	Write start-position adjustment		—
	Description	Adjusts the master-making start position. (Adjusts the master stop position immediately before write start operation by modifying the distance of the return movement from the master positioning sensor.)	
	Setting	Setting range: -50 to +50 (-5.0 mm to +5.0 mm) * (<+> for adjustment up) Setting unit: 1 (0.1 mm) Default: 0 (0 mm)	
0542	Master-making length adjustment		—
	Description	Adjusts the master-making area (length).	
	Setting	Setting range: -100 to +100 (-10.0 mm to +10.0 mm) * (<+> to increase length) Setting unit: 1 (0.1 mm) Default: 0 (0 mm)	

No.	Data setting		Print drum changeover
0543	Master-clamp-range adjustment		B
	Description	Adjusts the master clamp range during master-loading.	
	Setting	Setting range: -100 to +100 (-10.0 mm to +10.0 mm) * (<+> to increase) Setting unit: 1 (0.1 mm) Default: 0 (0 mm)	
0544	Master cut length adjustment		B
	Description	Adjusts the length of a single master (cutting timing).	
	Setting	Setting range: -100 to +100 (-10.0° to +10.0°) Setting unit: 5 (0.5°) * (1°= approx. 1.5 mm, <+> for increased master length) Default: 0 (0°)	
0545	TPH Thermal Power Adjustment		-
	Description	Adjusts the TPH power.	
	Setting	Setting range: 0 to 8 * (Smaller the number the higher the TPH power) Default: MZ8/MV8 = 2 MZ10/MV10 = 4	
No.	Data setting		Print drum changeover
0547	Master-making speed adjustment		B
	Description	Regulates the speed of the write pulse motor to adjust image stretching/shrinkage during master-making.	
	Setting	Setting range: -100 to +100 (-10.0% to +10.0%) * (<+> to elongate) Setting unit: 1 (0.1%) Default: 3 (0.3%)	
0548	Write Roller Diameter Reference Adjustment		-
	Description	Input the diameter of the Write roller to compensate the fluctuation in diameter between the rollers.	
	Setting	Setting range: 2305 (23.05mm) to 2315 (23.15mm) * (input the diameter in millimeters x 100) Setting unit: 1 (0.01mm) Default: 2310 (23.10mm)	
0550	Master-making Unit Adjustment		B
	Description	Adjusts the master-making unit stop position for master-making.	
	Setting	Setting range: -20 to +20 (-2.0 mm to +2.0 mm) Setting unit: 1 (0.1 mm) Default: 10 (1.0 mm)	
0551	Master-making Unit Pull-Out Position Adjustment		-
	Description	Adjusts the master-making unit stop position for removal.	
	Setting	Setting range: -20 to +20 (-2.0 mm to +2.0 mm) Setting unit: 1 (0.1 mm) Default: 0 (0 mm)	
0570	M.-Rmv. Roller Stop Timing		B
	Description	Sets the timing for vertical transport rollers to stop in relation to print drum angle.	
	Setting	Setting range: -50 to +50 (-50 degrees to +50 degrees) Setting unit: 1 (1 degree) Default: No.1 Drum = 0 (0 degree) No.2 Drum = 30 (30 degrees)	

No.	Data setting		Print drum changeover
0572	Master Removal Box Set-Motion		—
	Description	Activates or deactivates the master removal box set-motion when the machine power is turned, when the machine wakes up from sleep mode or when the box is inserted.	
	Setting	Setting range: 0 (Deactivated) 1 (Activated). Default: 0 (Deactivated)	
0573	Master compression-limit position (maximum end position)		B
	Description	Sets the pulse count for the compacting limit position.	
	Setting	Setting range: 106 to 163 (106 to 163 pulses) (Compression plate angle from home position: 65° to 100°) Setting unit: 1 (1 pulse) Default: A3/Ledger = 155 / Other sizes = 147	
0575	Master compression duration adjustment		B
	Description	Sets the time (time for single cycle of compacting FG) for the detection of compacting. * The compacting operation finishes when the one cycle time of the compacting FG exceeds the set time.	
	Setting	Setting range: 500 to 7000 (5 msec to 70 msec) Setting unit: 25 (0.25 msec) Default: 4000 (40 msec)	
0576	Master disposal box full detection position adjustment		B
	Description	Sets the pulse count for the full box compacting position.	
	Setting	Setting range: 100 to 162 (100 to 162 pulses) Setting unit: 1 (1 pulse) Default: A3/Ledger Drum = 120 pulses <MZ8/MV8> A3/Ledger Drum = 110 pulses <MZ10/MV10> B4/Legal Drum = 146 pulses <MZ8/MV8 & MZ10/MV10>	
0577	Master Compression PROTECT Position Adjustment		B
	Description	Adjusts the position of the Master compression plate when the PROTECT is ON.	
	Setting	Setting range: -30 to +30 (-30 pulses to +30 pulses) Setting unit: 5 (5 pulses) Default: 0 <39.6° from the HP position.)	
0578	Master disposal motor speed selection		B
	Description	Selects the master disposal motor speed table relative to master removal print drum speed.	
	Setting	Setting range: 0 (0.9 times the speed) 1 (1.0 times the speed) 2 (1.1 times the speed) 3 (1.2 times the speed) 4 (1.3 times the speed) Default: No 1 Drum = 2 No 2 Drum = 1	

No.	Data setting		Print drum changeover
0579	Master Compressing Completion Position Default Adjustment Selection		—
	Description	Enables/disables automatic adjustment to correct the default value of the compacting completion position. * The setting value applies to both first print drum and second print drum sides.	
	Setting	Setting range: 0 (Disable) 1 (Enable) Default: 1 (Enable)	
0580	Second Master Removal Print Drum Stop Angle Adjustment		—
	Description	Sets the angle at which the print drum rotates in reverse and halts after the master is released by the first clamp to permit removal of the master by the second print drum.	
	Setting	Setting range: –15 to +15 (–15° to +15°) Setting unit: 1 (1°) default: 0 (0°) * This is the position rotated 16° in reverse from the B-position of the second print drum.	
0584	Master Removal Software Counter FULL-Detection Selection		A
	Description	Sets the master removal software counter FULL detection number.	
	Setting	Setting range: 50 to 100 (50 to 100 master removal) Setting unit: 10 (10 masters) Default: 80 (80 masters) <The setting is enabled or disabled by Test Mode No.0585.>	
0585	Master Removal Software Count FULL-detection Enable/Disable		A
	Description	Selects whether to use the software count to detect master removal box FULL, or use the conventional FG sensor mechanical method to detect master removal box FULL.	
	Setting	Setting range: 0: Disable the software count FULL detection. 1: Enable the software count FULL detection. Default: 1: Enable the software count FULL detection.	
0586	TPH center position adjustment <Print Drum>		B
	Description	Adjusts the TPH center position <This test mode setting is remembered on each Drum - Drum PCB>	
	Setting	Setting range: –30 to +30 (–3.0 mm to +3.0 mm) + to the Rear of the Drum <to the Left on prints>. Setting unit: 1 (0.1 mm) Default: 0 (0 mm)	

6. Paper-feed/Paper-eject Test Mode

No.	Sensor/switch	Detecting condition	Print drum changeover
0600	Paper detection sensor	Light received (paper detected)	—
0601	Paper-length detection sensor	Light received (paper detected)	—
0602	Elevator upper-limit sensor A	Light path blocked (blocked by shield plate)	—
0603	Elevator upper-limit sensor B	Light path blocked (blocked by shield plate)	—
0604	Elevator lower-limit sensor	Light path blocked (blocked by shield plate)	—
0605	Paper sensor	Light path blocked (paper detected)	—
0606	Paper-ejection sensor	Light received (paper detected)	—
0607	Paper-feed-tray upper safety SW	ON (Safety switch not triggered.)	—
0608	Paper-feed-tray lower safety SW	ON (Safety switch not triggered.)	—
0609	Paper-feed tray elevation button	Switch ON (button depressed)	—
0610	Remaining Paper Volume Sensor A	Light path blocked (blocked by shield plate)	—
0611	Remaining Paper Volume Sensor B	Light path blocked (blocked by shield plate)	—
0612	Paper-ejection FG sensor	Light path blocked (blocked by shield plate)	—
0613	Card feeder (Option) attachment detection	Light path blocked (Card feeder detected)	
0614	Paper-feed pressure sensor	Light path blocked (Lever to the Card)	—
0615	Registration Sensor	Light path blocked (paper detected)	—
0616	Guide Roller Release Home Position Sensor	Light path blocked (blocked by shield plate)	—
0617	Central Transport Sensor	Light path blocked (paper detected)	—
0618	Paper Ejection Wing Home Position Sensor	Light path blocked (blocked by shield plate)	—
0619	Second Paper Feed Motor FG Sensor	Light path blocked (blocked by shield plate)	—
0620	Central Flap Home Position Sensor	Light path blocked (blocked by shield plate)	—
No.	Motor/solenoid	Remarks	Print drum changeover
0660	Paper ejection motor	ON & OFF <Stop Key = OFF>	—
0661	Suction fan	ON & OFF <Stop Key = OFF>	—
0662	Separation fan	ON & OFF <Stop Key = OFF> (All safety SW must be ON)	—
0663	Second Paper Feed Motor	ON & OFF <Stop Key = OFF>	—
0664	Central Suction Fan	ON & OFF <Stop Key = OFF>	—
0665	First Separation Fan	ON & OFF <Stop Key = OFF>	—
0666	Paper Ejection Wing Pulse Motor (CW)	ON & OFF <Stop Key = OFF>	—
0667	Paper Ejection Wing Pulse Motor (CCW)	ON & OFF <Stop Key = OFF>	—
0668	Feed Tray Button LED	The LED illuminates.	—

No.	Unit check		Print drum changeover
0681	Paper feed tray maximum up positioning		—
	Raises the paper feed tray to the paper feed position when the Start key is pressed.		
0682	Paper feed tray elevation up & down		—
	Repeats the paper feed tray raising and lowering operations.		
0683	Paper feed tray maximum down positioning		—
	Lowers the paper feed tray to the lower-limit position when the Start key is pressed.		
0684	Separation Pump Solenoid ON/OFF Action		B
	Turns the solenoid ON when the Start key is pressed. The solenoid automatically switches OFF after 10 seconds.		
0687	Paper Feed Reverse-rotation Prevention Solenoid ON/OFF Action		—
	Turns the solenoid ON when the Start key is pressed. The solenoid automatically switches OFF after 10 seconds.		
0688	Paper-feed clutch ON/OFF action		—
	Turns the clutch ON when the Start key is pressed. The clutch automatically switches OFF after 10 seconds.		
0702	Guide Roller Release Motor		—
	Repeats nipping and releasing operations when the Start key is pressed.		
0703	Paper Ejection Wing Home Action		—
	Moves the paper ejection wings to the home positions.		
0704	Paper Ejection Wing Target Shift		—
	Moves the wings to the positions set in Test Mode No. 780.		
0705	Multiple Paper Feed Detection Sensor Sensitivity Automatic Adjustment		—
	One sheet of thin RISO paper must be set at the multiple paper feed sensor position during this procedure.		
0707	Central Flap Motor (Normal)		—
	Repeats the flat movement between the up and down positions when the Start key is pressed.		
0708	Elevator motor ON action		—
	Rotates the elevator motor for raising operation (maximum time: 10 sec). Caution: Disconnect the Elevator motor from the machine before activating this test mode, or the machine will be damaged.		
0709	Registration Sensor Sensitivity Automatic Adjustment		—
	One sheet of thin RISO paper must be set at the registration sensor position during this procedure.		
0721	Paper width potentiometer data	Displays the paper width (mm) to the first decimal place after adjustment.	—
0722	Multiple Paper Feed Sensor	Displays the A/D value of the multiple paper feed sensor (paper sensor).	—
0723	Registration Sensor	Displays the A/D value of the registration sensor.	—
No.	Data setting		Print drum changeover
0740	Elevator upper-limit position selection		—
	Description	Selects the paper feed tray stop position (paper feed position). In the case of <Auto>, the upper-limit position is linked to the paper feed pressure lever position. The position is fixed in settings <1> through <3>.	
	Setting	Setting range: 0 (Auto. Linked to paper feed pressure lever position) 1 (Normal position) 2 (Card position) 3 (Custom position)	
		Default: 0 (Auto. Linked to paper feed pressure lever position)	

No.	Data setting		Print drum changeover
0741	Paper-feed-clutch ON angle		—
	Description	Sets the activation angle for the paper feed clutch.	
	Setting	Setting range: -200 to +200 (-20.0° to +20.0°) * (<+> for slower ON timing) Setting unit: 5 (0.5°) Default: 0 (0°)	
0742	Paper-feed-clutch OFF angle		—
	Description	Sets the deactivation angle for the paper feed clutch when the paper type is normal.	
	Setting	Setting range: -200 to +200 (-20.0° to +20.0°) * (<+> for slower OFF timing) Setting unit: 5 (0.5°) Default: 0 (0°)	
0744	Paper Feed Clutch OFF Angle (card)		—
	Description	Sets the deactivation angle for the paper feed clutch when the paper type is <CARD>.	
	Setting	Setting range: -200 to +200 (-20.0° to +20.0°) * (<+> for slower OFF timing) Setting unit: 5 (0.5°) Default: 0 (0°)	
0749	FP Paper Feed Clutch ON Angle		—
	Description	Sets the activation angle for the paper feed clutch for proof print.	
	Setting	Setting range: -100 to +100 (-10.0° to +10.0°) * <+> for slower ON timing Setting unit: 5 (0.5°) Default: 0 (0°)	
0750	Paper feed reverse-rotation prevention solenoid Activate/Deactivate selection.		—
	Description	Activates or Deactivates the Paper feed reverse-rotation prevention solenoid.	
	Setting	Setting range: 0: Deactivates the solenoid. 1: Activates the solenoid. Default: 1: Activates the solenoid. <Paper Feed Pressure Lever must be selected to Card to activate the solenoid.>	
0751	Paper feed jam detection angle. (Paper IN)		—
	Description	Sets the detection angle for paper feed jam (paper feed IN).	
	Setting	Setting range: -200 to +200 (-20.0° to +20.0°) * <+> for slower detection timing Setting unit: 5 (0.5°) Default: 0 (0°)	
0752	Paper feed jam detection angle. (Paper OUT)		—
	Description	Sets the detection angle for paper feed jam (paper feed OUT).	
	Setting	Setting range: -200 to +200 (-20.0° to +20.0°) * <+> for slower detection timing Setting unit: 5 (0.5°) Default: 0 (0°)	
0753	Paper receiving jam detection angle. (Paper IN)		—
	Description	Sets the detection angle for paper ejection jam (paper ejection IN).	
	Setting	Setting range: -500 to +500 (-50.0° to +50.0°) * (<+> for slower detection timing) Setting unit: 5 (0.5°) Default: 0 (0°)	

No.	Data setting		Print drum changeover
0754	Paper receiving jam detection angle. (Paper OUT)		—
	Description	Sets the detection angle for paper ejection jam (paper ejection OUT).	
	Setting	Setting range: –500 to +500 (–50.0° to +50.0°) * <+> for slower detection timing Setting unit: 5 (0.5°) Default: 0 (0°)	
0755	Paper-ejection motor speed adjustment (Proof-Print)		—
	Description	Sets the speed of the paper ejection motor for proof print.	
	Setting	Setting range: 0 (3.0 times the print drum circumferential speed). 1 (3.0 times the print drum circumferential speed). 2 (3.0 times the print drum circumferential speed). 3 (3.4 times the print drum circumferential speed). 4 (3.7 times the print drum circumferential speed). 5 (4.0 times the print drum circumferential speed). 6 (4.5 times the print drum circumferential speed). Default: 3 (3.4 times the print drum circumferential speed).	
0756		Paper-ejection motor speed adjustment (Print speed No.1)	
	Description	Sets the speed of the paper ejection motor for print speed No. 1.	
	Setting	Setting range: 0 (1.5 times the print drum circumferential speed). 1 (1.5 times the print drum circumferential speed). 2 (1.5 times the print drum circumferential speed). 3 (1.7 times the print drum circumferential speed). 4 (1.8 times the print drum circumferential speed). 5 (1.9 times the print drum circumferential speed). 6 (2.0 times the print drum circumferential speed). Default: 3 (1.7 times the print drum circumferential speed).	
0757		Paper-ejection motor speed adjustment (Print speed No.2)	
	Description	Sets the speed of the paper ejection motor for print speed No. 2.	
	Setting	Setting range: 0 (1.3 times the print drum circumferential speed). 1 (1.3 times the print drum circumferential speed). 2 (1.3 times the print drum circumferential speed). 3 (1.5 times the print drum circumferential speed). 4 (1.6 times the print drum circumferential speed). 5 (1.7 times the print drum circumferential speed). 6 (1.8 times the print drum circumferential speed). Default: 3 (1.5 times the print drum circumferential speed).	
0758		Paper-ejection motor speed adjustment (Print speed No.3)	
	Description	Sets the speed of the paper ejection motor for print speed No. 3.	
	Setting	Setting range: 0 (0.9 times the print drum circumferential speed), 1 (0.95 times the print drum circumferential speed). 2 (1.1 times the print drum circumferential speed), 3 (1.3 times the print drum circumferential speed). 4 (1.4 times the print drum circumferential speed). 5 (1.5 times the print drum circumferential speed). 6 (1.6 times the print drum circumferential speed). Default: 1 (1.3 times the circumferential speed)	

No.	Data setting		Print drum changeover
0759	Paper-ejection motor speed adjustment (Print speed No.4)		—
	Description	Sets the speed of the paper ejection motor for print speed No. 4.	
	Setting	Setting range:	
		0 (0.9 times the print drum circumferential speed).	
		1 (0.9 times the print drum circumferential speed).	
		2 (1.0 times the print drum circumferential speed).	
		3 (1.1 times the print drum circumferential speed).	
		4 (1.2 times the print drum circumferential speed).	
		5 (1.3 times the print drum circumferential speed).	
		6 (1.4 times the print drum circumferential speed).	
		Default: 4 (1.2 times the print drum circumferential speed).	
0760	Paper-ejection motor speed adjustment (Print speed No.5)		—
	Description	Sets the speed of the paper ejection motor for print speed No. 5.	
	Setting	Setting range:	
		0 (0.9 times the print drum circumferential speed).	
		1 (0.95 times the print drum circumferential speed).	
		2 (1.0 times the print drum circumferential speed).	
		3 (1.1 times the print drum circumferential speed).	
		4 (1.2 times the print drum circumferential speed).	
		5 (1.3 times the print drum circumferential speed).	
		6 (1.4 times the print drum circumferential speed).	
		Default: 4 (1.2 times the print drum circumferential speed).	
0761	High-speed printing paper ejection motor speed selection.		—
	Description	Sets the speed of the paper ejection motor for high-speed printing.	
	Setting	Setting range:	
		0 (0.9 times the print drum circumferential speed).	
		1 (0.95 times the print drum circumferential speed).	
		2 (1.0 times the print drum circumferential speed).	
		3 (1.1 times the print drum circumferential speed).	
		4 (1.2 times the print drum circumferential speed).	
		5 (1.3 times the print drum circumferential speed).	
		6 (1.4 times the print drum circumferential speed).	
		Default: 3 (1.1 times the print drum circumferential speed).	
0777	Print drum acceleration control selection		—
	Description	Selection of the print drum acceleration when the printing starts. The choice of 10 rpm acceleration per one drum rotation, or stepless acceleration.	
	Setting	Setting range: 0: Accelerates in steps 1: Stepless acceleration	
0779	Paper Ejection Wing Position Adjustment		—
	Description	Sets the adjustment value for the amount of paper ejection wing motion.	
	Setting	Setting range: -20 to +20 (-20 to +20 pulses) Setting unit: 1 (1 pulse) Default: 0 (0 pulse)	

No.	Data setting		Print drum changeover
0780	Paper Ejection Wing Target Position		—
	Description	Sets the positions of the paper ejection wings when the custom paper ejection position is selected. This setting is reflected in the operation set in Test Mode No. 704.	
	Setting	Setting range: 0 to 2150 (0 to 2150 pulses) Setting unit: 1 (1 pulse) Default: 1434 (1434 pulses)	
0781	Central Transport Jam Angle/IN		—
	Description	Adjusts the detection angle for paper input jams for the central transport sensor.	
	Setting	Setting range: -200 to +200 (-20.0° to +20.0°) * (<+> for slower detection timing) Setting unit: 5 (0.5°) Default: 0 (0°)	
0782	Central Transport Jam Angle/OUT		—
	Description	Adjusts the detection angle for paper output jams for the central transport sensor.	
	Setting	Setting range: -200 to +200 (-20.0° to +20.0°) * (<+> for slower detection timing) Setting unit: 5 (0.5°) Default: 0 (0°)	
0786	Second Paper Feed Speed Ratio (for all area)		B
	Description	Changes the speed of the timing roller.	
	Setting	Setting range: -20 to +20 (-2.0% to +2.0%) Setting unit: 2 (0.2%) Default: 0 (0.0%)	
0787	Second Paper Feed Speed Ratio (for first 160mm of the paper)		—
	Description	Changes the speed of the timing roller for the distance of 160mm from the leading edge for each paper.	
	Setting	Setting range: -20 to +20 (-2.0% to +2.0%) Setting unit: 2 (0.2%) Default: 0 (0.0%)	
0788	Paper Feeder Active/Inactive Selection		—
	Description	Allows master making and printing action without Paper feed tray movement. The selected setting is not stored. The setting returns to the default once the machine goes out of test mode.	
	Setting	Setting range: 0: Inactive 1: Active Default: 0: Inactive	
0793	Second Separation Fan Control in Printing with No.1 Print Drum Only		—
	Description	Selects whether to activate or deactivate the Separation fan for the No.2 print drum when printing with only No1 print drum.	
	Setting	Setting range: 0: OFF (No.2 Separation fan stays OFF) 1: ON (No.2 Separation fan stays ON) Default: 0: OFF (No.2 Separation fan stays OFF)	

7. Print Drum/ Print Adjustment Test Mode

No.	Sensor/switch	Detecting condition	Print drum changeover
0801	Position-B sensor	Light path blocked (blocked by shield plate)	B
0802	Main-motor FG sensor	Light path blocked (blocked by shield plate)	—
0803	Clamp sensor A	Light path blocked (blocked by shield plate)	B
0804	Clamp sensor B	Light path blocked (blocked by shield plate)	—
0805	Print Drum FG Sensor	Light path blocked (blocked by shield plate)	B
0806	Master loading sensor	Light received (master detected)	B
0807	Print-drum lock-position sensor	Light path blocked (blocked by shield plate)	B
0808	Drive Lock Release Sensor	Light path blocked (blocked by shield plate)	B
0809	Ink sensor	In contact with ink	B
0810	Overflow sensor	In contact with ink	B
0811	Ink-cartridge set SW	Switch ON (button depressed)	B
0812	Ink pump FG sensor	Light path blocked (blocked by shield plate)	B
0816	Drum free rotation SW	Switch ON (button depressed)	—
0818	Print-drum release button	Switch ON (button depressed)	—
0819	Print-drum connection signal	The print drum is connected to the main unit drawer connector.	B
0820	Print-drum safety switch	Switch ON (print drum set in machine)	B
0821	Front Cover Safety SW	Switch ON (front cover closed)	—
0830	Print-Pressure HP Sensor	Light path blocked (blocked by shield plate)	B
0832	Horizontal Home Position Sensor	Light path blocked (blocked by shield plate)	B
No.	Motor/solenoid	Remarks	Print drum changeover
0861	Main-motor action (30 rpm)	Main motor stops when STOP key is pressed.	—
0863	Clamp-motor action (Normal direction)	CCW (counterclockwise rotation)	B
0864	Clamp-motor action (Opposite direction)	CW (clockwise rotation)	B
0866	Print-drum release SW (button)	The LED illuminates.	—
0867	Print-drum brake fan	ON / OFF <Stop key = OFF>	—
No.	Unit check		Print drum changeover
0880	Variable print-drum rotation		—
	Rotates the print drum with the Speed selection key enabled.		
0881	Position-A action of the print drum		B
	Stops the print drum at position A.		
0882	Inking motor ON action		B
	Operates the inking motor (maximum time: 1 sec). Caution: Disconnect the inking motor from the machine before activating this test mode, or the machine will be damaged.		
0883	Clamp home positioning action		B
	Returns the clamp unit to the home position.		
0884	Clamp unit cycle action (3 step cycle)		B
	Caution: Prior to executing this test mode, bring the Print Drum to Position-A by Test Mode No. 881, and to Clamp home position by Test Mode No. 883, otherwise the machine will be damaged. Pressing the Start key once performs a single cycle of the following operations: << First clamp unit >> Step 1: Clamp home position → Clamp open Step 2: Clamp open Position A adjustment Step 3: Position A adjustment → Clamp closed (clamp at home position) << Second clamp unit >> Step 1: Clamp home position → Clamp open Step 2: Clamp open → Clamp closed (clamp at home position)		

No.	Unit check	Print drum changeover
0885	Drum lock solenoid ON/OFF action	B
	Pressing the Start key turns the solenoid ON. The solenoid automatically switches OFF after 10 seconds.	
0886	Pressure solenoid ON/OFF action	B
	Pressing Start key turns the solenoid ON. The solenoid automatically switches OFF after 10 seconds.	
0887	Print drum inking action	A
	Performs the following operations in the sequence indicated: 1) Ink is supplied while the print drum (until the inking sensor switches ON) rotates without applying pressure. 2) Confidential operation is executed. 3) From the time the inking sensor switches ON, the print drum rotates 10 turns while pressure applied. 4) The print drum halts at position B.	
0888	Print drum ink-drainage action	A
	Performs the ink drainage from the print drum in following sequence by one press of the START key: 1) Makes TPH test mode image on the master and wraps around the print drum. 2) Printing is started with no inking motion and with the ink sensor deactivated. 3) The printing is continued with until the STOP key is pressed. 4) The print drum stops at Position-B.	
0890	Print drum ink-code copy	B
	Copies information on the color and category used for ink cartridge and print drum compatibility from the ink cartridge tag to the print drum EEPROM. * Wait at least two seconds after setting the ink cartridge.	
0892	Machine Position-B stop (The position in which the print drum can be removed from the machine.)	B
	Stops the print drum at machine B position.	
0893	Print Drum Drive Lock Release Action	B
	The horizontal pulse motor releases the print drum from the drive connected position. Caution: Prior to activating the test mode, bring the specified print drum to Position-B by TM892.	
0894	Print Drum Drive Connection Action	B
	The horizontal pulse motor locks the print drum from the drive lock release position to the drive connected position. Caution: Prior to activating the test mode, bring the specified print drum to Position-B by TM892.	
0895	Master Loading Step Action	B
	Performs the following operations in the sequence indicated: 1) Press the Start key. 2) The master-making unit moves to the master-loading position. (first and second master-loading positions) 3) The drive motor halts. 4) The clamp unit descends. 5) The print drum moves to the position A. 6) The clamp unit position A adjustments are made. 7) Master making unit transfer-motor brake is released after one minute. 8) Press the Start key. 9) The clamp unit returns to the home position. 10) Master making unit transfer-motor brake is released. 11) The print drum moves to position B, and the master-making unit moves to the home position. 12) Pressing the Start key repeats steps (1) through (10).	

No.	Unit check		Print drum changeover
0896	Print Drum Free Rotation		—
	Rotates the print drum at 10 rpm. The rear cover safety SW must be pressed (buzzer will sound until the safety SW is pressed). To stop the drum rotation, press the Stop Key or release the Rear cover safety switch.		
0899	Master Making Unit Position-A Movement.		—
	Press Start Key for each Master Making Unit movement.		
0900	Vertical-centering action		—
	Brings the vertical print positioning motor to the HP position.		
0901	Vertical print position one cycle action		—
	Operates the vertical print positioning motor to one extreme to the other and stops at HP position..		
0902	Print Drum Horizontal Home Action		B
	Returns the print drum horizontal position to the center (home position).		
0903	Print Drum Horizontal Cycle Action		B
	Performs a single horizontal movement cycle.		
0904	Print-pressure home positioning		B
	Returns the pressure control unit to the home position.		
0905	Print-pressure one cycle action		B
	Performs a single print pressure control cycle.		
0906	Pressure Roller Maintenance Position		B
	Pressing the Start key raises the pressure roller. * This operation is activated only if the Start key is pressed with the print drum removed and the front cover closed.		
0907	Pressure Roller Maintenance Positioning		—
	Pressing the Start key lowers the pressure roller. * This operation is activated only if the Start key is pressed with the print drum removed and the front cover closed.		
0908	Print-pressure maintenance positioning		B
	Operates the pressure control pulse motor until the pressure spring removal position (-8130 pulses) is reached.		
No.	Data check	Content of display	Print drum changeover
0921	Print-drum angle display	Displays the current print drum angle (x 10).	B
0923	Print-drum ink temperature display	Displays the temperature value (°C) converted from the A/D value of the ink thermistor.	B
0925	Ink remaining volume display	Displays the amount of ink left in the ink cartridge as a percent (%) value read from the ink cartridge tag.	B
0926	Ink motor FG count	Displays the inking motor FG count value read from the ink cartridge tag. (1 count = 0.1 ml)	B
0928	Displays the Ink use starting date.	Displays the ink use start date stored in the ink cartridge tag. * For example, <2010/2/28> is displayed by alternating indications of <2010> and <0228>.	B
0929	Main motor offset voltage information	Displays the main motor offset voltage information acquired by test mode adjustment No.1105.	—

No.	Data check		Content of display	Print drum changeover
0930	Main motor setting information		Displays the main motor setting information acquired by test mode adjustment No.1105.	—
0931	Second paper feed motor offset voltage information		Displays the second paper feed motor offset voltage information acquired by test mode adjustment No.1106.	—
0932	Second paper feed motor setting information		Displays the second paper feed motor setting information acquired by test mode adjustment No.1106.	—
No.	Data setting			Print drum changeover
0940	Master loading sensor detection timing adjustment			B
	Description	Adjusts the master-loading detection angle.		
	Setting	Setting range: -200 to +100 (-20.0° to +10.0°) Setting unit: 5 (0.5°) Default: 0 (0°)	* (<+> for slower detection timing)	
0941	Print-drum Position-A adjustment			B
	Description	Adjusts the print drum position-A stop position.		
	Setting	Setting range: MZ8: -40 to +40 (-4.0° to +4.0°) MZ10: -60 to +40 (-6.0° to +4.0°) Setting unit: MZ8: 5 (0.5°) MZ10: 1 (0.1°) Default: MZ8 Drum No.1: 10 (1.0°) MZ8 Drum No.2: 0 (0°) MZ10 Drum No.1: -25 (-2.5°) MZ10 Drum No.2: -35 (-3.5°)	* (<+> for overrun)	
0942	Print-drum position-B adjustment			B
	Description	Adjusts the print drum position-B stop position.		
	Setting	Setting range: -40 to +40 (-4.0° to +4.0°) Setting unit: 5 (0.5°) Default: 0 (0°)	* (<+> for overrun)	
0943	Inking time adjustment (when over X% of ink is consumed from the ink tube.)			B
	Description	Sets the continuous ink sensor OFF detection time that prompts the inkless detection signal if the amount of ink consumed exceeds a set percent value (value set in Test Mode No. 948) (data stored in print drum PCB).		
	Setting	Setting range: 5 to 60 (5 to 60 sec) Setting unit: 1 (1 sec) Default: 10 (10 sec)		
0944	Inking time adjustment (right after the ink tube is replaced)			B
	Description	Sets the continuous ink sensor OFF detection time that prompts the inkless detection signal after ink cartridge replacement (data stored in print drum PCB). * This information is recorded in the print drum EEPROM.		
	Setting	Setting range: 5 to 60 (5 to 60 sec) Setting unit: 1 (1 sec) Default: 30 (30 sec)		

No.	Data setting		Print drum changeover
0945	Ink overflow detection frequency adjustment		B
	Description	Sets how frequently overflow sensor detection operations are performed to determine ink overflows. * This information is recorded in the print drum EEPROM.	
	Setting	Setting range: 1 to 200 (1 to 200 times) Setting unit: 1 (Once) Default: 50 (50 times)	
0946	Inking time adjustment (when under X% of ink is consumed from the ink tube.)		B
	Description	Sets the continuous ink sensor OFF detection time that prompts the inkless detection signal when the consumed ink volume is less than the set percentage (value set in Test Mode No. 948) (data stored in print drum PCB). * This information is recorded in the print drum EEPROM.	
	Setting	Setting range: 1 to 60 (1 to 60 sec) Setting unit: 1 (1 sec) Default: 15 (15 sec)	
0947	Inking drum rotation quantity (while inking) after ink tube is pulled out and put back.		B
	Description	Specifies the number of print drum rotations to be performed after ink cartridge removal/installation. <Machine power must be turned OFF and back ON for the newly set parameter to become effective.>	
	Setting	Setting range: 0 to 10 (0 to 10 times) Setting unit: 1 (Once) Default: 1 (Once)	
0948	Selection of X% for test modes No. 0943 and 0946.		B
	Description	Determines the inkless detection timing switching condition (ink consumption) based on remaining ink volume.	
	Setting	Setting range: 1 to 100 (1% to 100%) Setting unit: 1 (1%) Default: 80 (80%)	
0949	Print pressure setting for Proof-read printing (black ink)		—
	Description	Selects the print pressure table for determining the density of the first print (using black ink).	
	Setting	Setting range: 0 (very low density), 1 (low density), 2 (normal), 3 (high density), 4 (very high density), 5 (maximum density) Default: MZ8: 2 (normal) MZ10: 1 (low density)	
0950	Print pressure setting for Proof-read printing (color ink)		—
	Description	Selects the print pressure table for determining the density of the first print (using color ink).	
	Setting	Setting range: 0 (very low density), 1 (low density), 2 (normal), 3 (high density), 4 (very high density), 5 (maximum density) Default: MZ8: 2 (normal) MZ10: 0 (very low density)	

No.	Data setting				Print drum changeover
0951	Ink Color Code				B
	Description	Sets the color of ink to be set in the print drum (data stored in print drum PCB).			
	Setting	Setting range:			
		0 (Not specified)	65 (Blue)	66 (Blue2)	
		64 (Black)	68 (Blue4)	69 (Red)	
		67 (Blue3)	71 (Red3)	72 (Red4)	
		70 (Red2)	74 (Green2)	75 (Green3)	
		73 (Green)	77 (Yellow2)	78 (Brown)	
		76 (Yellow)	80 (Purple)	81 (Purple2)	
		79 (Brown2)	83 (Gray2)	84 (Light gray)	
		82 (Gray)	86 (Orange)	87 (Orange2)	
		85 (Light gray2)	89 (Gold2)	90 (Silver)	
		88 (Gold)	92 (Pink)	93 (Pink2)	
		91 (Silver2)			
		94 (Special color)			
Default: 0 (Not specified)					
0955	Print Drum Insertion Angle Fine Adjustment				B
	Description	This adjustment is performed if the print drum cannot be inserted even after making the adjustment in Test Mode No. 942 (Print-drum Position-B adjustment) (data stored in print drum PCB). * The position-B positioning operation is based on a value equal to the sum of the values in Test Mode No. 942 and No. 955. This value is between -40 and +40. The same value also applies when the print drum does engage.			
	Setting	Setting range: -40 to +40 (-4.0° to +4.0°) Setting unit: 1 (0.1°) Default: 0 (0°)			
0956	Automatic Print Position Reset Condition Setting				-
	Description	Selects the condition for automatic print position reset after master-making or renewal. * After automatic reset, a proof copy is output and the TC count is incremented. * In dual-color printing, an automatic reset is performed after master-making by both print drums, and a proof copy is output.			
	Setting	Setting range:			
		0 (No automatic reset) * Remains at center after master-making/renewal			
		1 (Automatic reset only after master renewal) 2 (Automatic reset after master-making and renewal)			
Default: 1 (Automatic reset only after master renewal)					
0959	Master Loading Drum Angle Compensation				B
	Description	Compensates the Position-A of the print drum at the start of the master loading on the drum.			
	Setting	Setting range: +80 to -80 (+8.0° to -8.0°)			
		Setting unit: 1 (0.1°)			
		Default: MZ8 A3/Ledger machine = No.1 drum: -30 No.2 drum: 0 MZ8 B4 machine = No.1 drum: -20 No.2 drum: 0 MZ10 all machines = No.1 drum: -50 No.2 drum: 0			

No.	Data setting		Print drum changeover
0960	Position-A Drum Angle Fine Adjustment <for each print drum>		B
	Description	Makes fine adjustment of the Position-A angle for each print drum. * The actual Position-A angle of the print drum is the sum of Test Mode No. 0941 and 0960.	
	Setting	Setting range: -40 to +40 (-4.0° to +4.0°)	
		Setting unit: 1 (0.1°) Default: 0 (0°)	
0968	Vertical Print Position HP Compensation <for each print drum>		B
	Description	Adjusts the offset amount in the vertical print position for each print drum.	
	Setting	Setting range: -50 to +50 (-5mm to +5mm)	
		Setting unit: 1 (0.1mm) Default: 0 (0mm)	
0968	Vertical Print Position HP Compensation <on the machine>		-
	Description	Adjusts the offset amount in the vertical print position for each print drum.	
	Setting	Setting range: -50 to +50 (-5mm to +5mm)	
		Setting unit: 1 (0.1mm) Default: 0 (0mm)	
0969	Vertical Print HP Position Adj		-
	Description	Sets the home position offset value for the vertical print position phase difference.	
	Setting	Setting range: -50 to +50 (-5.0 to +5.0 mm)	
		Setting unit: 1 (0.1 mm) Default: 0 (0 mm)	
0971	Vertical HP Paper Feed Timing Adj		B
	Description	Sets the home position offset value for the vertical print position (second paper feed timing).	
	Setting	Setting range: -50 to +50 (-5.0 to +5.0 mm)	
		Setting unit: 1 (0.1 mm) Default: 0 (0 mm)	
0972	Printing pressure HP adjustment (Print Drum)		B
	Description	Sets the offset value for the print pressure position (data stored in print drum PCB). * This setting should be made only when required by the print drum. * Printing pressure HP adjustment is based on a value equal to the sum of the values in Test Mode No. 972 and No. 975. This value is between -500 and +500.	
	Setting	Setting range: -500 to +500 (-5000 to +5000 pulses)	
		Setting unit: 1 (10 pulses) Default: 0 (0 pulse)	
0973	Horizontal HP Adjustment (Print Drum)		B
	Description	Sets the offset value for the horizontal print home position (data stored in print drum PCB). * This setting should be made only when required by the print drum. * Horizontal print HP adjustments are made based on a value equal to the sum of the values in Test Mode No. 973 and No. 974. This value is between -20 and +20.	
	Setting	Setting range: -20 to +20 (-2.0 to +2.0 mm)	
		Setting unit: 1 (0.1 mm) Default: 0 (0 mm)	

No.	Data setting		Print drum changeover
0974	Horizontal HP Adjustment (Machine)		B
	Description	Sets the offset value for the horizontal print home position. * This setting should be made only when required by the machine. * Horizontal print HP adjustments are made based on a value equal to the sum of the values in Test Mode No. 973 and No. 974. This value is between -20 and +20.	
	Setting	Setting range: -20 to +20 (-2.0 to +2.0 mm) Setting unit: 1 (0.1 mm) Default: 0 (0 mm) * (<+> for adjustment left)	
No.	Data setting		Print drum changeover
0975	Printing Pressure HP Position Adjustment (Machine)		B
	Description	Sets the offset value for the print pressure position. * This setting should be made only when required by the machine. * The printing pressure HP adjustments are made based on a value equal to the sum of the values in Test Mode No. 972 and No. 975. This value is between -500 and +500.	
	Setting	Setting range: -500 to +500 (-5000 to +5000 pulses) Setting unit: 1 (10 pulses) Default: 0 (0 pulse) * (<+> for increased print pressure)	
0976	Print Drum Inside Adjustment Selection		B
	Description	Selects the area for storing adjustment values specific to each print drum. Set a unique number if two or more machines are used. Each print drum can recognize up to three machines.	
	Setting	Setting range: 0 to 2 Setting unit: 1 Default: 0	
0977	Vertical and Horizontal Motion Distance Switching		-
	Description	Selects whether the motion increment is set to 0.1 mm or 0.5 mm if the fine adjustment button is not displayed.	
	Setting	Setting range: 0 (0.5 mm) Setting unit: 1 (0.1 mm) Default: 0 (0.5 mm)	
0978	Number of Idling Selection		-
	Description	Selection of the print drum rotation quantity table between Japan and Overseas. <The Overseas setting makes more drum idling rotation after the machine is not in use for 4 or more days.>	
	Setting	Setting range: 0 (Japan) 1 (Overseas) Default: 1 (Overseas)	
0979	Pressure Table Configuration		-
	Description	Shifts the printing density table to darker printing.	
	Setting	Setting range: 0 = Normal density table. 1 = 1.5 times darker. 2 = 2.0 times darker. Default: 0 (Normal density table)	

No.	Data setting		Print drum changeover
0981	Print Pressure Idle Position Adjustment (When printing with only No.2 Print Drum.)		—
	Description	Sets the print pressure idle position of No.1 print drum side when printing with No.2 print drum only.	
	Setting	Setting range: -1170 to 0. Setting unit: 10 (10 pulses) Default: -968 (-968 pulses)	
0989	Interval Upper Limit Setting		—
	Description	Selects the maximum print drum rotation between printing in Interval printing mode.	
	Setting	Setting range: 0 (maximum 10 times) 1 (maximum 99 times) Default: 0 (maximum 10 times)	

8. Protected Area Test Mode

No.	Unit check		Print drum changeover
1102	Paper size VR adjustment		—
	Sets the VR value for 105 mm (A6 paper width).		
1103	Paper size VR adjustment		—
	Sets the VR value for 297 mm (A3 paper width).		
1104	LCD Base Point Compensation		—
	Make adjustments as described below. 1. Touch two points located at diagonally opposite points on the panel. 2. Display the confirmation screen, touch three points, and confirm that the compensation is performed properly.		
1105	Main Motor Parameter Acquisition Mode		—
	Sets the main motor control parameters for stable motor control in the DSP, including machine and motor variations (operation time: approx. 15 sec). * Both print drum drives must be connected during this operation. * The acquired parameters can be checked by Test Mode No. 0929 (Main motor offset voltage information) and No.0930 (Main motor setting information).		
1106	Second Paper Feed Motor Parameter Acquisition Mode		—
	Sets the second paper feed motor control parameters for stable motor control in the DSP, including machine and motor variations. (operation time: approx. 20 sec) * The guide roller must be in its lowered position during this operation. * The acquired parameters can be checked by Test Mode No. 0931 (Second paper feed motor offset voltage information) and No.0932 (Second paper feed motor setting information).		
No.	Data clear	Details	Print drum changeover
1198	Initialize Memory	Initializes the mechanical unit PCB memory. <This test mode is not displayed on the operation panel.>	—
No.	Data setting		Print drum changeover
1201	Paper Size Selection		—
	Description	Selects the paper size detection unit in either INCH, MILLIMETER or CHINESE.	
	Setting	Setting range: 0 (Millimeter) 1 (Chinese) 2 (Inch)	
1210	Drum Code Entry		B
	Description	Sets print drum information and size information in the print drum EEPROM (data stored in print drum PCB).	
	Setting	Setting range: 0 to 255 <129=A3, 130=B4, 132=A4-R/Letter-R, 133=Ledger> Default: 0	
1211	Drum Serial Code Entry 1		B
	Description	Inputs the Top 4 digits of the print drum serial code (data stored in print drum PCB).	
	Setting	Setting range: 0 to 9999 Setting unit: 1 Default: 0	
1212	Drum Serial Code Entry 2		B
	Description	Inputs the Last 4 digits of the print drum serial code (data stored in print drum PCB).	
	Setting	Setting range: 0 to 9999 Setting unit: 1 Default: 0	

No.	Data setting			Print drum changeover
1214	Drum Color Code Entry			B
	Description	Sets the print drum color information in the print drum EEPROM (data stored in print drum PCB).		
	Setting	Setting range:		
		0 (Not specified) 2 (Blue) 4 (Red) 6 (Riso Federal Blue) 8 (Riso Marine Red) 10 (Green) 12 (Brown) 14 (Light Gray) 16 (Fluorescence Pink) 17 (Fluorescence Orange) 18 (Orange) 20 (Hunter Green) 30 (Custom color) 32 (Order: paper not specified)	1 (Black) 3 (Medium Blue) 5 (Bright Red) 7 (Purple) 9 (Burgundy) 11 (Teal) 13 (Yellow) 15 (Gray) 19 (Flat Gold) 21 (Crimson) 31 (Order: paper specified) 63 (Any color)	
		Default: 0 (Not specified)		
1215	Drum Ink Category Entry			B
	Description	Sets the ink category code (3 bits) stored in the print drum EEPROM (data stored in print drum PCB). <This test mode is not displayed on the operation panel.>		
	Setting	Setting range:	0 (Not specified) 1 (normal) 2 (HD) 3 N 4 (Spare 2) 5 (Spare 3) 6 (Spare 4) 7 (Spare 5)	
		Default: 0 (Not specified)		
1220	Scanner Adjustment (1) Sub-Scanning Position Compensation			—
	Description	Sets the value indicated on the sticker affixed to the scanner unit.		
	Setting	Setting range: MZ8: 0 to 255 MZ10: 89 to 167 Setting unit: 1 (0.0508mm) * (<+> for image to the top.) Default: 128		
1221	Scanner Adjustment (2) Main-Scanning Position Compensation			—
	Description	Sets the value indicated on the sticker affixed to the scanner unit.		
	Setting	Setting range: MZ8: 0 to 255 MZ10: 81 to 175 Setting unit: 1 (0.0432mm = Approx. 24 dots) * (<+> for image to the left.) Default: 128		
1222	Scanner Adjustment (3) Sub-Scanning Ratio Compensation			—
	Description	Sets the value indicated on the sticker affixed to the scanner unit.		
	Setting	Setting range: MZ8: 0 to 100 MZ10: 46 to 54 Setting unit: 1 (0.1%) * (<+> to shrink.) Default: 50		

No.	Data setting		Print drum changeover
1223	Scanner Adjustment (4) Offset		—
	Description	Sets the value indicated on the sticker affixed to the scanner unit.	
	Setting	Setting range: -255 to +255 Setting unit: 1 Default: 64 * The setting value varies automatically after offset adjustment, and the most recent setting value is used for the next offset adjustment. However, the value displayed in Test Mode does not change until the machine is restarted.	
1224	Scanner Adjustment (5) Gain		—
	Description	Sets the value indicated on the sticker affixed to the scanner unit.	
	Setting	Setting range: 0 to 63 Setting unit: 1 Default: 0 * The setting value varies automatically after gain adjustment, and the most recent setting value is used for the next gain adjustment. However, the value displayed in Test Mode does not change until the machine is restarted.	
1229	Linked Printer (RLP) Enable Control		—
	Description	Enables/disables linked printer function.	
	Setting	Setting range: 0 (Disabled), 1 (Enabled) Default: 0 (Disabled)	
1231	LCD Contrast Adjustment		—
	Description	Adjusts panel contrast.	
	Setting	Setting range: -120 to +120 Setting unit: 1 Default: 0	
1232	LCD Backlight Adjustment		—
	Description	Adjusts panel backlighting.	
	Setting	Setting range: 50 to 115 Setting unit: 1 Default: 85	
1233	TPH master-making horizontal position adjustment		B
	Description	Adjusts the horizontal print position of the thermal print head.	
	Setting	Setting range: -30 to +30 (-3.0 mm to +3.0 mm) Setting unit: 1 (0.1 mm) Default: 0 (0 mm) * <+> moves the image to the back on the print drum (left on the prints).	
1234	TPH resistance input		—
	Description	Sets thermal print head resistance.	
	Setting	Setting range: MZ8 (300x600 dpi) = 1200 to 2300 (1200 ohm to 2300 ohm) MZ10 (600x600 dpi) = 1200 to 5920 (1200 ohm to 5920 ohm) Setting unit: 1 (1 ohm) Default: 1200 ohm	

No.	Data setting		Print drum changeover
1242	Scanning Adjustment (7) Offset-2		—
	Description	Sets the value indicated on the sticker affixed to the scanner unit.	
	Setting	Setting range: -255 to +255 Setting unit: 1 Default: 255 * The setting value varies automatically after offset adjustment, and the most recent setting value is used for the next offset adjustment. However, the value displayed in Test Mode does not change until the machine is restarted.	
1243	Scanning Adjustment (8) Gain-2		—
	Description	Sets the value indicated on the sticker affixed to the scanner unit.	
	Setting	Setting range: 0 to +64 Setting unit: 1 Default: 0 * The setting value varies automatically after gain adjustment, and the most recent setting value is used for the next gain adjustment. However, the value displayed in Test Mode does not change until the machine is restarted.	

9. Test Mode for Optional Unit (AF)

No.	Sensor/switch	Detecting condition	Print drum changeover
3000	AF-unit detection signal check	An AF is connected.	—
3001	AF Original registration sensor	Light path blocked (original detected)	—
3002	AF Original IN sensor	Light path blocked (original detected)	—
3003	AF Original OUT sensor	Light path blocked (original detected)	—
3004	AF original detection sensor	Original is detected.	—
3005	AF Cover Set SW	Switch ON (AF closed)	—
3006	AF Original Size Sensor 1	Light received (original detected)	—
3007	AF Original Size Sensor 2	Light received (original detected)	—
3008	AF Original Feed Cover Sensor	Sensor ON (cover closed) <Duplex AF only>	—
3009	AF Original Width Detection Sensor 1	Sensor ON (width less than 235mm) <Duplex AF only>	—
3010	AF Original Width Detection Sensor 2	Sensor ON (width larger than 270mm or less than 190mm) <Duplex AF only>	—
3011	AF Original End Detection Sensor	Sensor ON (original detected) <Duplex AF only>	—
3012	AF Flipper Sensor	Sensor ON (original detected) <Duplex AF only>	—
No.	Motor/solenoid	Remarks	Print drum changeover
3030	AF read pulse-motor CW	Rotates the AF read pulse motor in feed direction. <This test mode is for AF6.> * For Duplex AF, Test Mode No.3033 movement is made.	—
3032	AF Read/Switch-back Pulse Motor	AF original feed & switch-back pulse motor operation. <Duplex AF only>	—
3033	AF Transfer Pulse Motor	AF transfer pulse motor operation. <This test mode is for Duplex AF only.> * For AF6, Test Mode No.3030 movement is made.	—
No.	Unit check		Print drum changeover
3041	AF one cycle action with no Auto Base Control		—
	Performs a single AF scanning cycle. Picks up original -> Scanner unit returns to home position -> Shading -> Scanner unit moves to scanning position -> Scans and ejects original -> Scanner unit returns to home position. * When using this test mode for Duplex AF, make simplex/duplex selection by TM3077.		
3042	AF original feed action		—
	Performs AF original feed operation. Picks up original -> Scans original (original transport) * When using this test mode for Duplex AF, make simplex/duplex selection by TM3077.		
3044	AF Original IN Sensor Sensitivity Adjustment <This test mode is for AF6.>		—
	Adjusts the sensitivity of the original IN sensor.		
3045	AF Original Guide Minimum Width <This test mode is for AF6.>		—
	Sets the VR value when the paper guides are brought to the minimum-width position.		
3046	AF Original Guide Maximum Width <This test mode is for AF6.>		—
	Sets the VR value when the paper guides are brought to the maximum-width position.		
3047	AF Original Feed Clutch Check		—
	Activates the original feed clutch for 10 seconds. <Duplex AF only>		
3048	AF Original Feed Base Solenoid Check		—
	Activates the original feed base soenoid for 10 seconds. <Duplex AF only>		
3049	AF Flipper Solenoid Check		—
	Activates the flipper solenoid for 10 seconds. <Duplex AF only>		

No.	Data setting			Print drum changeover
3074	Scanning-speed adjustment to control Elongation & Shrinkage in scanning. <For both AF6 & Duplex scanner>			—
	Description	Adjusts original scanning speed for the AF. (Adjusts AF read pulse motor speed.)		
	Setting	Setting range: AF6 Scanner: -50 to +50 (-5.0% to +5.0%). Duplex Scanner: -30 to +30 (-3.0% to +3.0%). Setting unit: 1 (0.1%) Default: 0 (0%)	* <+> to elongate	
3076	AF Original END Signal Timing. <For both AF6 & Duplex scanner>			—
	Description	Adjusts original scanning end position.		
	Setting	Setting range: AF6 Scanner: -63 to +63 (-6.3 mm to +6.3 mm) Duplex Scanner: -30 to +30 (-3.0mm to +3.0mm). Setting unit: 1 (0.1 mm) Default: 0 (0 mm)	* <+> for scanning to continue further down.	
3077	AF Original Feed Sequence Change <Duplex AF only>			—
	Description	AF original transfer action selection (1 cycle action).		
	Setting	Setting range: 0: Simplex 1: Duplex 2: Simplex (overside) for ejection to Sorter. Default: 0 (Simplex)	This test mode setting applies to Test Mode No. 3041 & 3042 operation.	

10. Test Mode for Optional Unit (Job Separator)

No.	Sensor/switch		Detecting condition	Print drum changeover
3100	Job separator tape jam sensor		ON when tape is jammed.	—
3101	Job separator tape detection sensor		ON where tape is detected.	—
3102	Job separator power switch		ON when powered ON	—
3103	Job separator connection signal		Job separator is connected.	—
No.	Unit check			Print drum changeover
3140	Tape output			—
	Outputs one tape. * Test Mode No. 3170 Stamping Quantity is enabled			
No.	Data setting			Print drum changeover
3170	Stamping quantity			—
	Description	Sets the number of stamping operations during Test Mode No. 3140 (Tape Output).		
	Setting	Setting range:	0 (No stamping) 1 (1 stamping) 2 (2 stamping) * Returns back to the default setting when powered OFF.	
		Default: 0 (No stamping)		
3171	Tape jammed message <activate or deactivate>			—
	Description	Displays/Hides the tape jam error display in tape output.		
	Setting	Setting range:	0 (Disable) 1 (Enable)	
		Default: 1 (Enable)		

11. Test Mode for Optional Unit (Storage Memory)

No.	Unit check		Print drum changeover
3340	Storage Memory Configuration Change		—
	Processing for changing the card used by the RP to a configuration compatible with the current machine. * Reconfigured card cannot be used by the RP. * Only one storage device should be set in the slot to permit configuration adjustments. (Two cards cannot be processed simultaneously.)		
3341	Externally Connected Controller Status Printout		—
	With an external controller connected, the controller status page master is made and printed out.		
No.	Data clear	Details	Print drum changeover
3355	Storage Memory Initialize (32M)	Initializes the storage device to delete data from the 32M storage device or when an error related to storage device prevents data restoration. * Only one storage device can be set in the slot for initialization.	—
3356	Storage Memory Initialize (128M)	Initializes the storage device to delete data from the 128M storage device or when an error related to storage device prevents data restoration. * Only one storage device can be set in the slot for initialization.	—
3357	Storage Memory Initialize (FAT32)	Initializes the storage device to delete data from the 256M to 8GByte storage device or when an error related to storage device prevents data restoration. * Only one storage device can be set in the slot for initialization.	—
No.	Data check	Content of display	Print drum changeover
3361	Storage Memory Information	Displays the volume label, capacity, area used, and available storage volume. * Only one storage device can be set in the slot.	—

12. Test Mode for Optional Unit (Linked Printer)

No.	Data setting			Print drum changeover
3570	RLP Print Position Adjustment (Main)			—
	Description	Adjusts RLP print position (main scanning direction = Horizontal adjustment). * If multiple RLP units are installed, this setting will affect all units.		
	Setting	Setting range: −50 to +50 (−5.0 mm to +5.0 mm) Setting unit: 1 (0.1 mm) Default: 0 (0 mm)	* <+> moves to the left.	
3571	RLP Print Position Adjustment (sub scanning direction = Vertical adjustment))			—
	Description	Adjusts RLP print position (sub scanning direction). * If multiple RLP units are installed, this setting will affect all units.		
	Setting	Setting range: −50 to +50 (−5.0 mm to +5.0 mm) Setting unit: 1 (0.1 mm) Default: 0 (0 mm)	* <+> moves up	
3572	Zero Print Master-making Warning			—
	Description	When auto-link is turned ON and if master-making is performed with the print quantity set to 0 in PtoP mode (scan-to-print), this setting determines whether the warning (F60) is displayed or not.		
	Setting	Setting range:	0: (No warning message display.) 1: (Warning message is displayed.)	
		Default: 0: (No warning message display.)		
3579	RLP Duplex Print Auto-Repeat			—
	Description	Selection of whether the duplex printing selection is reset to simplex (OFF) or the duplex printing is automatically recalled for the next print job.		
	Setting	Setting range:	0: (OFF) 1: (Duplex setting is recalled)	
		Default: 1: (Duplex setting is recalled)		

MEMO

CHAPTER 16: PANEL MESSAGE

CONTENTS

Error Code Display	16-3
1. Error type.....	16-3
2. Error point.....	16-3
1) List of panel messages	16-4
2) Details of error codes.....	16-7
1. Service engineer call errors (T**)	16-7
2-1. Jam errors (A**)	16-25
2-2. Jam errors (A**: Indicates the detail of J-type error).....	16-28
3. Option errors (B**).....	16-30
4. Consumable errors (C**).....	16-34
5. Set check errors (D**)	16-36
6. Warning (E**: Service engineer call).....	16-43
7. Warning (F**: Others).....	16-44
8. Parameter Errors (H**)	16-59
9. J-type Error Display (J**).....	16-60
10. Errors Saved in Memory.....	16-60

MEMO

Explanation of Panel Messages

Error Code Display

- If an error occurs, an error message is displayed with an icon and an error code indicating the specifics of the generated error.
- Each error code consists of an <error type> indicating the type of error and an <error-point number> describing the error generating section.

Example: T99-123T99: Error type
123: Error point

1. Error type

The order of error priority is shown below.

Error type	Description
T	Service engineer call errors
A	Jam errors
B	Option errors
C	Consumable errors
D	Set check errors
E	Warnings (service engineer call)
F	Warnings (other)
H	Parameter errors
J	Paper jam errors

2. Error point

The error point classification is shown below.

Error point	Description
0**	System, panel
1**	Scanning section, image processing section
2**	Master-making section
3**	Master disposal section
4**	Paper feed/ejection section
5**	Print drum section
6**	Printing adjustment section
7**	Optional equipment

1) List of panel messages

Error type	Description
T01	Main motor lock [Drum No.1]
T02	Elevator motor lock
T03	Clamp motor lock [Drum No.1]
T04	Ink overflow [Drum No.1]
T05	Print positioning pulse motor lock
T06	Horizontal pulse motor lock [Drum No.1]
T11	Print pressure control pulse motor lock [Drum No.1]
T12	Master disposal section motor lock [Drum No.1]
T13	Cutter motor lock
T14	Flatbed error
T15	AF error
T17	Solenoid counter not connected
T19	Thermal pressure motor lock
T20	Paper ejection section motor lock
T24	Inking motor lock [Drum No.1]
T25	No-battery error
T27	Master-making unit motor lock [Drum No.1]
T29	Guide release motor lock
T31	Central flap motor lock
T41	Main motor lock [Drum No.2]
T43	Clamp motor lock [Drum No.2]
T44	Overflow [Drum No.2]
T46	Horizontal pulse motor lock [Drum No.2]
T51	Print pressure control pulse motor lock [Drum No.2]
T52	Master disposal section motor lock [Drum No.2]
T64	Inking motor lock [Drum No.2]
T67	Master-making unit motor lock [Drum No.2]
T91	Panel EEPROM error
T92	Print drum EEPROM write error
T93	NET-D hardware error
T94	Call service error: TPH

Error type	Description
T95	FRAM error
T96	Data not input
T97	PC card access error
T98	Hardware error
T99	Software error

Error type	Description
A01	Master feed error
A02	Master loading error [Drum No.1]
A04	Master removal error [Drum No.1]
A05	Master present in master removal section [Drum No.1]
A06	Paper feed tray check
A07	Paper feed error
A08	Paper jam [Drum No.1]
A09	Paper ejection error
A10	AF original feed error
A16	Awaiting removal of master [Drum No.1]
A17	A17 [Cutter error]
A25	Central transport error
A34	Awaiting master reset
A42	Master loading error [Drum No.2]
A44	Master removal error [Drum No.2]
A45	Master present in master removal section [Drum No.2]
A48	Paper jam [Drum No.2]
A56	Awaiting removal of master [Drum No.2]

Error type	Description
B01	Card counter: No card
B21	Storage memory: Read/write error
B22	Job separator: Power OFF error
B23	Job separator: No-tape error
B24	Job separator: Jam error
B29	USB Memory: Incompatible Device (HUB)
B30	USB Memory: Non-Compliant Device
B31	Network cable not connected
B32	NIC: External communication error
B33	IP address setup error
B34	RLP (linked printer): No-toner error
B35	RLP (linked printer): Service error
B38	USB Memory: Folder making error
B39	USB Memory: Read/Write error

Error type	Description
C01	Ink cartridge replacement [Drum No.1]
C02	Master roll replacement
C03	Master disposal box full [Drum No.1]
C04	No-paper error
C05	Both master disposal boxes full
C41	Ink cartridge replacement [Drum No.2]
C43	Master disposal box full [Drum No.2]

Error type	Description
D01	Print drum not installed [Drum No.1]
D02	Print drum incompatibility [Drum No.1]
D03	Ink cartridge not installed [Drum No.1]
D04	Ink cartridge incompatibility [Drum No.1]
D05	Master not installed
D07	Master disposal box not installed [Drum No.1]
D08	Master-making unit not installed
D09	Master-making unit top cover not closed
D11	Front cover not closed
D13	Machine rear cover not closed
D17	Master incompatibility
D18	Print drum ready to pull-out [Drum No. 1]
D19	Master-making unit ready to pull out
D20	Master-making unit drawer cover not closed
D21	Master-making unit drawer cover ready to open
D22	Print drum pull-out command [Drum No.1]
D23	AF Feed cover opened
D28	D to P delete job Drum not in position (Print Drum No.1)
D30	Front cover setting demand
D41	Print drum not installed [Drum No.2]
D42	Print drum incompatibility [Drum No.2]
D43	Ink cartridge not installed [Drum No.2]
D44	Ink cartridge incompatibility [Drum No.2]
D47	Master disposal box not installed [Drum No.2]
D58	Print drum ready to pull-out [Drum No. 2]
D62	Print drum pull-out command [Drum No.2]
D68	D to P delete job Drum not in position (Print Drum No.2)

Error type	Description
E01	Battery replacement
E02	Maintenance call

Error type	Description
F01	No master on Drum No.1
F02	Paper/master-making size incompatibility 1
F03	Multi-up: Paper size error
F04	Admin. Setting: Maximum setting reached
F06	N-Up: Incorrect paper size
F07	N-Up: Incorrect original size
F09	Booklet: Incorrect paper size
F10	Paper/master-making size incompatibility 2
F11	Auto size reproduction disabled (falls outside range of possible size reproduction)
F13	4P Booklet was selected with wrong size paper on the paper feed tray]
F14	4P Booklet was selected with wrong size original
F20	Binding margin: Wrong paper size
F24	Auto size reproduction disabled (falls outside range of possible size reproduction)
F30	Multiple feed check
F32	Storage memory: No space available
F33	USB memory: No space available
F37	Combined use of book mode and AF not possible
F43	DtoP original/paper incompatibility
F44	Auto size reproduction disabled (exceeds original size detection range)
F45	Presence of original unknown/no original
F46	Print drum color not matching with DtoP job color [Drum No. 1]
F47	Combined use of AF and postcard size reproduction not possible
F48	Multi-up: Outside original size detection range
F49	Multi-up: No original when Start key pressed
F52	Use of RLP mode not possible (RLP information not acquired)
F58	Use of RLP mode not possible (NET-D initialization in process)
F60	RLP auto-link/master-making continuation confirmation (when printing quantity is 0)
F61	RLP paper/original size incompatibility
F62	RLP auto-link/RLP error
F63	RLP auto tray selection/nonstandard-size original
F64	Specified function disabled, at job reception
F65	Scan mode auto-saving size selection/non-standard size original
F66	RLP saddle stitching not possible

Error type	Description
F67	RLP rotation sorting not possible
F68	Specified area/traced color separation: Excess number of specified areas
F69	Specified area/traced color separation: Distance of border for specified area longer than master-making size
F70	Specified area/traced color separation: Image processing time-out error
F71	No master on Drum No.2
F72	Hand-written/red-color separation: Image processing time-out error
F73	Auto tray selection not possible, RLP tray designation disabled
F74	150ppm not possible due to low temperature
F75	Combined use of specified area separation and AF not possible
F76	Print drum color not matching with DtoP job color [Drum No.2]
F77	Print drum color not matching with DtoP job color [Drum No.1]
F78	Digitizer: Stage cover open
F79	Digitizer: No original during re-scanning
F80	Paper not compatible with dual-color printing
F81	Dual-color printing: Ink-saving mode set on only one print drum
F82	Paper not compatible for Drum No.2 printing
F83	Use of Drum No.2 mode not possible
F85	Scanning not possible: External CI not connected
F90	Supply stock management (ink)
F91	Supply stock management (master)
F93	Reproduction ratio is larger than master making area
F94	Protect confirmation (compulsory)
F95	Protect confirmation
F96	Admin. Mode: Due Date for the ID Counter Report
F97	Admin. Mode: Due Date for the Counter Report

Error type	Description
H01	Generic supply parameter input (Drum No.1)
H04	Generic supply parameter input (master)
H07	Generic supply parameter input (Drum No.2)

2) Details of error codes

1. Service engineer call errors (T**)

Error type	T01 [Main motor lock] (Drum No.1)
Panel display	T01-*** !!System Error!! Press Reset Key If Recovery has Failed, Call Service
Error reset method	Press the Reset key.
Error point	Error detecting condition
520	Main motor lock [1] detected. The main motor FG sensor count reduced to 50% from the set speed.
521	The position B sensor does not change status within 2910 pulses while the main motor is ON.
523	Main motor lock [2] detected. (The main motor lock detected by DSP)
537	The print drum fails to stop at position B.
538	The print drum is not locked during operations.

Error type	T02 [Elevator motor lock]
Panel display	T02-*** !!System Error!! Press Reset Key If Recovery has Failed, Call Service
Error reset method	Press the Reset key or switch power OFF, then ON.
Error point	Error detecting condition
400	The elevator upper-limit position detection and the elevator lower-limit detection are switches ON simultaneously.
401	Elevator motor overload detected. The elevator motor overcurrent port was activated 5 consecutive times (polling at 10-msec intervals).
404	The elevator lower-limit sensor does not switch OFF within 2 seconds after the elevator motor applies a lifting force from the elevator lower-limit position.
405	The elevator upper-limit sensor does not switch ON within 12 seconds after the elevator motor applies a lifting force.
406	The elevator upper-limit sensor does not switch OFF within 2 seconds after the elevator motor applies a lowering force from the elevator upper-limit position.
407	The elevator lower-limit sensor does not switch ON within 12 seconds after the elevator motor applies a lowering force.
408	The elevator upper-limit sensor remained OFF for more than 2 seconds during elevator servo action.

Error type	T03 [Clamp motor lock] (Drum No.1)
Panel display	T03-*** !!System Error!! Press Reset Key If Recovery has Failed, Call Service
Error reset method	Press the Reset key.
Error point	Error detecting condition
500	The clamp sensor A of the Clamp No.1 is OFF at the end of the clamp movement.
501	The clamp sensor B of the Clamp No.1 does not change status within 1 second after the clamp motor operates in the forward direction.
502	The clamp sensor B does not change status within 1 second after the clamp motor operates in the reverse direction.
503	The clamp sensor A of the Clamp No.1 does not switch ON within 3 seconds during clamp unit initialization.
504	The logical values of the clamp sensors A and B of the Clamp No.1 do not match at the start of the clamp releasing operation.
505	The logical values of the clamp sensors A and B of the Clamp No.1 do not match at the start of the print drum position-A compensation operation.
506	The logical values of the clamp sensors A and B of the Clamp No.1 do not match at the start of the clamp unit home positioning operation.
507	The clamp sensor A of the Clamp No.1 is ON after completion of the clamp releasing operation.
508	The clamp sensor A of the Clamp No.1 is ON after completion of the print drum position-A compensation operation.
514	The print drum is not at the horizontal home position while the clamp unit operates.
545	The clamp unit is not at the specified position at the start of print drum rotation.
546	The clamp unit is not at the home position at the start of print drum horizontal movement.
547	The clamp unit is not at the home position when the master-making unit slides.

Error type	T04 [Ink overflow]
Panel display	T04-*** !!System Error!! Press Reset Key If Recovery has Failed, Call Service
Error reset method	Press the Reset key with the overflow sensor switched OFF.
Error point	Error detecting condition
513	The overflow sensor switches ON successively for the set number of times during the 10-ms-interval overflow sensor check.

Error type	T05 [Print positioning pulse motor lock]
Panel display	T05-*** !!System Error!! Press Reset Key If Recovery has Failed, Call Service
Error reset method	Press the Reset key or switch power OFF, then ON.
Error point	Error detecting condition
603	The Vertical Print Positioning Pulse Motor did not complete the movement within the set time when the motor rotated in the print image downward direction.
604	The Vertical Print Positioning Pulse Motor did not complete the movement within the set time when the motor rotated in the print image upward direction.

Error type	T06 [Horizontal pulse motor lock] (Drum No.1)
Panel display	T06-*** !!System Error!! Press Reset Key If Recovery has Failed, Call Service
Error reset method	Press the Reset key or switch power OFF, then ON.
Error point	Error detecting condition
607	The horizontal home position sensor detects no light within the set period after the print drum drive releasing operation started.
608	At the light path of the horizontal home position sensor is not blocked within the set time after the print drum connecting operation started.
609	Although the horizontal pulse motor has completed the operation in sensor stop mode, the logical value of the sensor at the arrival point does not match the design value, or the operation fails to complete in counter stop mode within the specified time.
627	The light path of the drive release home position sensor is not blocked during print drum drive connecting operation.
628	The light path of the drive release home position sensor is not detected during print drum drive release operation.

Error type	T11 [Print pressure control pulse motor lock] (Drum No.1)
Panel display	T11-*** !!System Error!! Press Reset Key If Recovery has Failed, Call Service
Error reset method	Press the Reset key or switch power OFF, then ON.
Error point	Error detecting condition
600	The print pressure control sensor does not change from OFF to ON within 3.9 seconds after the print pressure control motor activates to increase pressure during home positioning.
601	The print pressure control sensor does not change from ON to OFF within 4.6 seconds after the print pressure control motor activates to reduce pressure during home positioning.
602	Although the print pressure control pulse motor has completed the operation in sensor stop mode, the logical value of the sensor at the arrival point does not match the design value, or the operation fails to complete in counter stop mode within the specified time.

Error type	T12 [Master disposal section motor lock] (Drum No.1)
Panel display	T12-*** !!System Error!! Press Reset Key If Recovery has Failed, Call Service
Error reset method	Press the Reset key.
Error point	Error detecting condition
300	Overload current detected in master disposal motor. The master disposal motor over current was detected 5 consecutive times (polling at 10-msec intervals).
301	Master compression motor lock detected. The compression detection switch went ON while lifting the compression plate.
302	The compression FG value was larger than normal when the compression plate made HP movement preparation.
305	The master compression HP sensor does not switch ON within 7.5 seconds after the master compression motor activates to lift the compression plate.
306	The master compression HP sensor does not switch OFF within 2 seconds after the master compression motor activates in the compressing direction.
307	[1] The compression detection does not switch ON within 7.5 seconds after the master compression motor activates in the compressing direction. (Within 5 seconds if moving to the Protect position.) [2] The master compression FG sensor does not count 20 pulses even after the master compression motor rotated in the compressing direction for 800ms.
309	The FG count value does not change when the master compression motor applies a force to begin the compression, after moving away from the home position sensor. (The master compression motor FG sensor status does not change.)
316	Master disposal motor lock detected. The master disposal motor FG count reduced to half the value from the set speed.

Error type	T13 [Cutter motor lock]
Panel display	T13-*** !!System Error!! Press Reset Key If Recovery has Failed, Call Service
Error reset method	Press the Reset key.
Error point	Error detecting condition
203	The cutter home position switch does not change from ON to OFF within 100 ms after the cutter unit moves from the home position.
204	The cutter home position switch does not switch ON within 300 ms after the cutter begins operating.
205	The master positioning sensor is ON even when the print drum rotates to the specified angle after cutting the master.

Error type	T14 [Flatbed error]
Panel display	T14-*** !!System Error!! Press Reset Key If Recovery has Failed, Call Service
Error reset method	Press the Reset key.
Error point	Error detecting condition
112	The home position sensor does not switch OFF within the set time.
113	The home position sensor does not switch ON within the set time.
114	Faulty parameters sent from the machine to the scanner.
115	The scanner operation fails to complete within the set time.
116	Time-out error generated during black shading (Black compensation fails to complete within the set time.)
117	Time-out error generated during white shading (White compensation fails to complete within the set time.)
123	Time-out error generated during offset adjustment (Offset adjustment fails to complete within the set time.)
124	Time-out error generated during gain adjustment (Gain adjustment fails to complete within the set time.)
125	Offset adjustment processing not completed (Process fails to complete within the set times.)
126	Gain adjustment processing not completed (Process fails to complete within the set times.)
135	Scanner GA PCB malfunction in Offset adjustment.
136	Scanner GA PCB malfunction in Gain adjustment.
137	Scanner GA PCB malfunction during Black shading.
138	Scanner GA PCB malfunction during White shading.

Error type	T15 [AF error]
Panel display	T15-*** !!System Error!! Turn Main Power SW OFF Then ON If Recovery has Failed, Call Service
Error reset method	Switch power OFF, then ON.
Error point	Error detecting condition
100	Original IN sensor adjustment error in the AF.
101	AF-EEPROM error.
110	Time-out error generated at the ABC standby position. This error is issued if the original stops at the ABC standby position after the start of AF scanning operation (with ABC), and the original remains electrically charged for the set time. * Error issued from AF.
130	AF command reception time-out error generated in the main printer unit. After a command is sent from the printer to the AF, if no response is transmitted within the set time, the same command is retransmitted. This error is generated if no response is made to this retransmitted command within the set time.
131	The main printer unit received an undefined command from the AF.
132	The main printer unit detected a communication sequence error in the AF unit. * Error issued from AF.
133	AF communication error in the main printer unit (ACK or NAK error).
134	The main printer unit did not transmit a signal to the AF within the set time. After a command is sent from the AF to the printer, if no response is transmitted within the set time, the same command is retransmitted. This error is generated if no response is made to this retransmitted command within the set time.
143	Original width VR value error in the AF.
161	AF unit not connected.

Error type	T17 [Solenoid counter not connected]
Panel display	T17-*** !!System Error!! Press Reset Key If Recovery has Failed, Call Service
Error reset method	Solenoid counter connection signal: ON
Error point	Error detecting condition
020	The solenoid counter is not connected.

Error type	T19 [Thermal pressure motor lock]
Panel display	T19-*** !!System Error!! Press Reset Key If Recovery has Failed, Call Service
Error reset method	Press the Reset key.
Error point	Error detecting condition
207	The TPH pressure sensor does not change from ON to OFF within 2 seconds after the thermal pressure motor operates to reduce pressure (or during home positioning).
208	The TPH pressure sensor does not change from OFF to ON within 2 seconds after the thermal pressure motor operates to reduce pressure.
216	The TPH pressure sensor does not change from ON to OFF within 2 seconds after the thermal pressure motor operates to apply pressure.
217	The TPH pressure sensor does not change from OFF to ON within 2 seconds after the thermal pressure motor operates to apply pressure.

Error type	T20 [Paper ejection section motor lock]
Panel display	T20-*** !!System Error!! Press Reset Key If Recovery has Failed, Call Service
Error reset method	Press the Reset key.
Error point	Error detecting condition
414	The paper ejection wing home position sensor does not change status within the set time after the paper ejection wing pulse motor starts operation.
415	The paper ejection wing home position sensor does not switch OFF within the set time after the paper ejection wing pulse motor operates when the paper ejection wings are at the home position (home position sensor ON).
416	Paper ejection motor overload current detected. The motor over-current port switches ON 2 consecutive times after the paper ejection motor switches ON (polling at 10-msec intervals).
437	Paper ejection motor lock detected. The paper ejection motor FG sensor count reduced to half from the set count.
442	Although the paper ejection wing pulse motor has completed the operation in sensor stop mode, the logical value of the sensor at the arrival point does not match the design value, or the operation fails to complete in counter stop mode within the specified time.

Error type	T24 [Inking motor lock] (Drum No.1)
Panel display	T24-*** !!System Error!! Press Reset Key If Recovery has Failed, Call Service
Error reset method	Press the Reset key or switch power OFF, then ON.
Error point	Error detecting condition
539	Inking motor lock detected. The inking motor FG sensor status did not change even after 200msec from the operation of the inking motor.

Error type	T25 [No-battery error]
Panel display	T25-*** !!Low Battery!! Call Service
Error reset method	Replace the battery.
Error point	Error detecting condition
026	No battery power. * Readjust the machine clock after resetting the error.

Error type	T27 [Master-making unit motor lock] (Drum No.1)
Panel display	T27-*** !!System Error!! Press Reset Key If Recovery has Failed, Call Service
Error reset method	Press the Reset key.
Error point	Error detecting condition
248	The master-making unit position sensor does not change status as specified within the set time after the master-making unit begins moving to the standby position.
249	The light path of the master-making unit pull-out position sensor was not blocked within the set time when the master-making unit moved to the pull-out position.
250	The master-making unit position sensor does not change status as specified within the set time after the master-making unit begins moving to the master-making position.
251	Although the master-making unit transport pulse motor has completed the operation in sensor stop mode, the logical value of the sensor at the arrival point does not match the design value. Or the operation fails to complete in counter stop mode within the specified time.
252	The top cover of the master-making unit opened at a location other than the master-making unit pull-out position. (The pressure plate opened when the master-making-unit was moving.)
257	The top cover of the master-making unit opened at a location other than the master-making unit pull-out position. (The master-making-unit tried to move with its top cover opened.)

Error type	T29 [Guide release motor lock]
Panel display	T29-*** !!System Error!! Press Reset Key If Recovery has Failed, Call Service
Error reset method	Press the Reset key.
Error point	Error detecting condition
438	The guide roller release home position sensor detects no light within 3.8 seconds after the guide roller begins operating.
439	The light path of the guide roller release home position sensor is not blocked within 3.8 seconds after the guide roller begins operating.
450	Overload current detected in the guide roller release motor. The guide roller release motor overcurrent port switches ON 20 consecutive times (polling at 10-msec intervals).

Error type	T31 [Central flap motor lock]
Panel display	T31-*** !!System Error!! Press Reset Key If Recovery has Failed, Call Service
Error reset method	Press the Reset key.
Error point	Error detecting condition
445	The central flap home position sensor detects no light within the set time after the central flap motor begins operating.
446	The light path of the central flap home position sensor is not blocked within the set time after the central flap motor begins operating.
451	Overload current detected in the central flap motor. The central flap motor overcurrent port switches ON 20 consecutive times (polling at 10-msec intervals).

Error type	T41 [Main motor lock] (Drum No.2)
Panel display	T41-*** !!System Error!! Press Reset Key If Recovery has Failed, Call Service
Error reset method	Press the Reset key.
Error point	Error detecting condition
521	The position-B sensor does not change status within 2910 pulses while the main motor is ON.
523	Main motor lock [2] detected by DPS.
537	The position-B stop operation failed.
538	The print drum is not locked during print drum operation.

Error type	T43 [Clamp motor lock] (Drum No.2)
Panel display	T43-*** !!System Error!! Press Reset Key If Recovery has Failed, Call Service
Error reset method	Press the Reset key.
Error point	Error detecting condition
500	The Second clamp sensor logical value is incorrect when the Second clamp completes the movement.
501	The Second clamp sensor does not change status within 1 second after the clamp motor begins rotating in the forward direction.
502	The Second clamp sensor does not change status within 1 second after the clamp motor begins rotating in the reverse direction.
504	The logical values of the Second clamp sensor is incorrect at the start of the clamp releasing operation.
506	The logical values of the Second clamp sensor is incorrect at the start of the clamp unit home positioning operation.
514	The print drum is not at the horizontal home position while the clamp unit is operating.
545	The clamp unit is not at the specified position when the print drum begins rotating.
546	The clamp unit is not at the home position when the print drum initiates horizontal movement.
547	The clamp unit is not at the home position when the master-making unit begins its motion.

Error type	T44 [Ink overflow (Drum no.2)]
Panel display	T44-*** !!System Error!! Press Reset Key If Recovery has Failed, Call Service
Error reset method	With the overflow sensor switched OFF, press the Reset key.
Error point	Error detecting condition
513	The overflow sensor switches ON successively for the set number of times during the 10-ms-interval check.

Error type	T46 [Horizontal pulse motor lock] (Drum no.2)
Panel display	T46-*** !!System Error!! Press Reset Key If Recovery has Failed, Call Service
Error reset method	Press the Reset key or switch power OFF, then ON.
Error point	Error detecting condition
607	The horizontal home position sensor detects no light within xx seconds after the horizontal home positioning operation initiates movement toward the right during drive releasing operation.
608	The light path of the horizontal home position sensor is not blocked within xx seconds after the horizontal home positioning operation initiates movement toward the left during drive connecting operation.
609	Although the horizontal pulse motor has completed the operation in sensor stop mode, the logical value of the sensor at the arrival point does not match the design value, or the operation fails to complete in counter stop mode within the specified time.
627	The light path of the drive release home position sensor is not blocked during drive connecting operation.
628	The drive release home position sensor detects no light during drive releasing operation.

Error type	T51 [Print pressure control pulse motor lock] (Drum No.2)
Panel display	T51-*** !!System Error!! Press Reset Key If Recovery has Failed, Call Service
Error reset method	Press the Reset key or switch power OFF, then ON.
Error point	Error detecting condition
600	The print pressure control sensor does not change from OFF to ON within 3.9 seconds after the print pressure control pulse motor activates to increase pressure during home positioning.
601	The print pressure control sensor does not change from ON to OFF within 4.6 seconds after the print pressure control pulse motor activates to reduce pressure during home positioning.
602	Although the print pressure control pulse motor has completed the operation in sensor stop mode, the logical value of the sensor at the arrival point does not match the design value, or the operation fails to complete in counter stop mode within the specified time.

Error type	T52 [Master disposal section motor lock] (Drum No.2)
Panel display	T52-*** !!System Error!! Press Reset Key If Recovery has Failed, Call Service
Error reset method	Press the Reset key.
Error point	Error detecting condition
300	Overload current detected in master disposal motor. The master disposal motor over current was detected 5 times consecutively (polling at 10-msec intervals).
301	Master compression motor lock detected. The compression detection switch went ON while lifting the compression plate.
305	The master compression HP sensor does not switch ON within 7.5 seconds after the master compression motor activates to lift the compression plate.
306	The master compression HP sensor does not switch OFF within 2 seconds after the master compression motor activates in the compressing direction.
307	[1] The compression detection does not switch ON within 7.5 seconds after the master compression motor activates in the compressing direction. (Within 5 seconds if moving to the Protect position.) [2] The master compression FG sensor does not count 20 pulses even after the master compression motor rotated in the compressing direction for 800ms.
309	The FG count value does not change when the master compression motor applies a force to begin the compression, after moving away from the home position sensor. (The master compression motor FG sensor status does not change.)
316	Master disposal motor lock detected. The master disposal motor FG count reduced to half the value from the set speed.

Error type	T64 [Inking motor lock] (Drum No.2)
Panel display	T64-*** !!System Error!! Press Reset Key If Recovery has Failed, Call Service
Error reset method	Press the Reset key or switch power OFF, then ON.
Error point	Error detecting condition
539	Inking motor lock detected. The inking motor FG sensor does not change status within 20 ms after the inking motor switches ON.

Error type	T67 [Master-making unit motor lock] (Drum No.2)
Panel display	T67-*** !!System Error!! Press Reset Key If Recovery has Failed, Call Service
Error reset method	Press the Reset key.
Error point	Error detecting condition
248	The master-making unit position sensor does not change status as specified within the set time after the master-making unit begins moving to the standby position.
250	The master-making unit position sensor does not change status as specified within the set time after the master-making unit begins moving to the master-making position.

Error type	T91 [Panel EEPROM error]
Panel display	T91_*** !!System Error!! Press Reset Key If Recovery has Failed, Call Service
Error reset method	Press the Reset key.
Error point	Error detecting condition
013	The date information data is incorrect
968	Read error generated in the panel EEPROM.
969	Write error generated in the panel EEPROM.
976	Checksum error generated in the panel EEPROM.
977	Verification error generated in the panel EEPROM.

Error type	T92 [Print drum EEPROM write error]
Panel display	T92_*** !!System Error!! Press Reset Key If Recovery has Failed, Call Service
Error reset method	Press the Reset key.
Error point	Error detecting condition
570	The print drum EEPROM is being accessed while the print drum is performing a releasing action.

Error type	T93 [NET-D hardware error]
Panel display	T93_*** !!System Error!! Turn Main Power SW OFF Then ON If Recovery has Failed, Call Service
Error reset method	Switch power OFF, then ON.
Error point	Error detecting condition
932	No response from the NIC (Network Interface Card) when NIC is accessed.

Error type	T94 [Call service error: TPH]
Panel display	T94_*** !!System Error!! Turn Main Power SW OFF Then ON If Recovery has Failed, Call Service
Error reset method	Switch power OFF, then ON.
Error point	Error detecting condition
225	The TPH code does not correspond to the machine model code when the power is switched ON (only when the master-making unit is in the operating position) or when the master-making unit is inserted in the operating position.

Error type	T95 [FRAM error]
Panel display	T95-*** !!System Error!! Turn Main Power SW OFF Then ON If Recovery has Failed, Call Service
Error reset method	Switch power OFF, then ON.
Error point	Error detecting condition
059	The machine serial number information sent from the SH-PCB does not correspond to the machine serial number information in the mechanical control PCB.

Error type	T96 [Data not input]
Panel display	T96-*** !!System Error!! Turn Main Power SW OFF Then ON If Recovery has Failed, Call Service
Error reset method	Enter parameters in Test Mode.
Error point	Error detecting condition
171	TPH resistance not set.
172	Scanner adjustment not completed.
433	Paper width potentiometer (VR) not set.
569	Print drum color or ink category not set.
613	Print pressure compensation not set.
972	REv data storage area not initialized.

Error type	T97 [PC card access error]
Panel display	T97-*** !!System Error!! Press Reset Key If Recovery has Failed, Call Service
Error reset method	Press the Reset key.
Error point	Error detecting condition
939	PC card access error: PC card not set.
940	PC card access error: Device information multiple-ID error (PCMCIA card information error).
941	PC card access error: Device error (incompatible CF card error).
942	PC card access error: File creation failed (File with the same name already exists).
943	PC card access error: Unformatted.
944	PC card access error: Media ID error.
945	PC card access error: Media error (CF card cannot be accessed).
946	PC card access error: Insufficient disc capacity (Not enough space available on the CF card to write data).
990	PC card access error: Specified file not found on the selected drive.
991	PC card access error: The file accessed is not currently open.
992	PC card access error: File information storage folder already in use.
993	PC card access error: Incorrect read address setting for data transfer to mechanical unit.
994	PC card access error: File deletion failed.

Error type	T98 [Hardware error]
Panel display	T98-*** !!System Error!! Turn Main Power SW OFF Then ON If Recovery has Failed, Call Service
Error reset method	Switch power OFF, then ON.
Error point	Error detecting condition
005	Hardware error (Machine model code error).
006	FRAM checksum error.
025	Faulty tag RF PCB on the print drum (initial communication with the tag RF PCB failed).
028	Test Mode NO. 103 [Machine Test-Mode Data Recording] failed.
029	Test Mode NO. 105 [Machine Test-Mode Data Re-store] failed.
034	Unable to write data to the main unit EEPROM (EEPROM cannot be accessed).
035	CRC <cyclic redundancy check> error generated in the main unit EEPROM (EEPROM data error).
039	Incorrect EEPROM.
051	Communication error with touch-panel controller.
053	Unsuccessful attempt to read memory parameters (program, mode, user paper).
054	Unsuccessful attempt to write memory parameters (program, mode, user paper).
055	The machine model code sent from the SH-PCB does not correspond to the machine model information in the mechanical control PCB.
063	The test mode parameter setting data in the memory is out of selectable range. CAUTION: When this error displays, make sure to go into Test Mode and activate Test Mode No.112 [Clearing Normal Area Test Mode Data Memory], or the machine mechanical mechanism may damage.
064	Communication between SH PCB and mechanical control PCB: Undefined command was issued.
065	Communication error between SH PCB and mechanical control PCB (01) (on mechanical control PCB side): Incorrect number of bytes exist in received command.
067	Communication error between SH PCB and mechanical control PCB (03) (on mechanical control PCB side): RNK received.
068	Communication error between SH PCB and mechanical control PCB (04) (on mechanical control PCB side): NAK received 3 times.
069	Communication error between SH PCB and mechanical control PCB (05) (on mechanical control PCB side): No ACK response.
070	Communication error between SH PCB and mechanical control PCB (06) (on mechanical control PCB side): Transmission prevented by SH PCB.
071	Communication error between SH PCB and mechanical control PCB (07) (on mechanical control PCB side): Command received while awaiting response.
072	Communication error between SH PCB and mechanical control PCB (08) (on mechanical control PCB side): FB command received in mode other than download mode.
073	Communication error between SH PCB and mechanical control PCB (09) (on mechanical control PCB side): FC/FD command received in mode other than download mode.
074	Communication error between SH PCB and mechanical control PCB (10) (on SH PCB side): FE command received (No mechanical control PCB program).
075	Communication error between SH PCB and mechanical control PCB (11) (on SH PCB side): Incorrect number of bytes in received command.
076	Communication error between SH PCB and mechanical control PCB (12) (on SH PCB side): Received ACK not specified in sequence.
077	Communication error between SH PCB and mechanical control PCB (13) (on SH PCB side): RNK received.
078	Communication error between SH PCB and mechanical control PCB (14) (on SH PCB side): NAK received 3 times.
079	Communication error between SH PCB and mechanical control PCB (15) (on SH PCB side): No ACK response.
080	Communication error between SH PCB and mechanical control PCB (16) (on SH PCB side): Transmission prevented by the mechanical control PCB (CTS = 1).

Error type	T98 [Hardware error]	
Panel display	T98_*** !!System Error!! Turn Main Power SW OFF Then ON If Recovery has Failed, Call Service	
Error reset method	Switch power OFF, then ON.	
Error point	Error detecting condition	
081	Communication error between SH PCB and mechanical control PCB (17) (on SH PCB side): Mechanical control download mode was transmitted by error.	
082	Communication error between SH PCB and mechanical control PCB (18) (on SH PCB side): Mechanical CTS remained at <1> for 2 seconds.	
083	Communication error between SH PCB and mechanical control PCB (19) (on SH PCB side): FA command received at time other than startup.	
084	Communication error between SH PCB and mechanical control PCB (20) (on SH PCB side): <80> command not received within 10 seconds after power ON.	
094	Communication sequence error between SH PCB and mechanical control PCB. (Mechanical control PCB error).	
097	The Test Mode adjustment value set in the print drum memory lies outside the adjustment range.	
098	The machine serial number information in the main unit EEPROM does not correspond to the machine serial number information in the FRAM.	
099	SH4F PCB: Undefined interrupt processing was generated.	
119	Faulty image PCB (Memory check of the image processing IC failed). (Image processing IC check timing: during initialization)	
120	Time-out error generated while awaiting scanner serial communication interrupt command (The CPU failed to receive interrupt command from FORCE device within 100 ms).	
	Scanner serial communication timing:	Transmission of data to AK8412 (A/D converter). Transmission of data to scanner gate array. Reading of data from scanner gate array. Reading of TPH thermister A/D converter data.
129	Faulty scanner gate array PCB (Error generated in the memory check of the scanner gate array).	
245	Time-out error (action other than sensor standard) for the write pulse motor during master transport in master-making operation.	
246	Time-out error (action other than sensor standard) for the load pulse motor during master transport in master-making operation.	
422	The DA setting for adjustment of the light-emitting section reached the upper-limit value during automatic multiple paper feed adjustment in Test Mode No. 705 [Multiple Paper Feed Detection Sensor Sensitivity Automatic Adjustment].	
423	The DA setting for adjustment of the light-emitting section reached the lower-limit value during automatic multiple paper feed sensor adjustment in Test Mode No. 705 [Multiple Paper Feed Detection Sensor Sensitivity Automatic Adjustment].	
448	The DA setting for adjustment of the light-emitting section reached the upper-limit value during automatic registration sensor adjustment in Test Mode No. 709 [Registration Sensor Sensitivity Automatic Adjustment].	
449	The DA setting for adjustment of the light-emitting section reached the lower-limit value during automatic registration sensor adjustment in Test Mode No. 709 [Registration Sensor Sensitivity Automatic Adjustment].	
453	Timeout during multiple feed sensor sensitivity automatic adjustment. (Error displays when the adjustment is made without paper.)	

Error type	T98 [Hardware error]
Panel display	T98-*** !!System Error!! Turn Main Power SW OFF Then ON If Recovery has Failed, Call Service
Error reset method	Switch power OFF, then ON.
Error point	Error detecting condition
454	Timeout during registration sensor sensitivity automatic adjustment. (Error displays when the adjustment is made without paper.)
735	24V-OP does not go ON (Possibility of broken Option related Fuse = Fuse F3).
736	Fuse chip (CP2) on Mechanical Control PCB is faulty.
777	Test Mode No. 103 [Machine Test Mode Data Recording] error - Error in making file.
778	Test Mode No. 103 [Machine Test Mode Data Recording] error - Error in making directory.
787	Test Mode No. 105 [Machine Test Mode Data Restore] error - No file to restore.
788	Test Mode No. 105 [Machine Test Mode Data Restore] error - Machine type data error.
789	Test Mode No. 105 [Machine Test Mode Data Restore] error - Machine serial number error.
790	Test Mode No. 105 [Machine Test Mode Data Restore] error - File version number error.
791	Test Mode No. 105 [Machine Test Mode Data Restore] error - Machine re-boot error after restore.
792	Test Mode No. 105 [Machine Test Mode Data Restore] error - No directory error.
921	Faulty USB controller chip. (USB connection between the machine and PC).
922	SH4F PCB system lock (image communication error).
934	Communication error between mechanical control PCB and RF tag PCB (detection on tag RF PCB side).
935	Communication error between mechanical control PCB and RF tag PCB (detection on mechanical control PCB side).
937	Serial number not set.
938	FRAM version down.
947	24V-A does not switch ON (possibility of blown 24V-A fuse).
948	24V-B does not switch ON (possibility of blown 24V-B fuse).
949	24V-A does not switch OFF.
950	24V-B does not switch OFF.
952	Checksum error in SH4F PCB flash memory.
953	Error generated during attempt to write data to SH4F PCB flash memory.
960	Error generated during attempt to read data from SH4F PCB flash memory.
961	SH4F PCB flash memory not in use.
978	Illegal power ON command received from the mechanical control PCB at a time other than boot up or wake-up.
979	Abnormal properties value in SH4F PCB flash memory.
983	24V-C does not go ON when the machine reboots from the stand-by mode.
984	24V-C does not go OFF when the machine goes into low-power mode.
986	The software for the mechanical control PCB does not match the DSP (main, secondary) software. Download the DSP software version suitable for the software for the mechanical control PCB.
987	Communication error between DSP and mechanical control PCB.
988	The second paper feed motor parameter and the main motor parameter are <00h>. [Main motor parameter acquisition mode] and [second paper feed motor parameter acquisition mode] in Test Mode have not been executed.
996	Faulty RF-PCB, either on the master making unit or print drum.

Error type	T99 [Software error]
Panel display	T99_*** !!System Error!! Turn Main Power SW OFF Then ON If Recovery has Failed, Call Service
Error reset method	Switch power OFF, then ON.
Error point	Error detecting condition
014	Sub-microcomputer is physically broken.
510	Angle control error.
899	Wrong type mechanical control PCB attached.
982	The program loader on the Mechanical Control PCB is for another machine model.

2-1. Jam errors (A**)

Error type	A01 [Master feed error]
Panel display	A01-*** Master Mis-Feed Pull Out Master Making Unit and Rewind Master Roll, then Reset Master in Place.
Error reset method	Master-making unit sensor: OFF -> ON and Master positioning sensor: OFF << Reset the master to cancel the error. >> (Or switch power OFF, then ON.)
Error point	Error detecting condition
201	During master settings, cutting, or making, the master positioning sensor does not switch ON, even after the master is sent.
202	During master setting or at the start of the master-making operation, the master positioning sensor does not switch OFF, even when the master is rewound for the set time.
211	The master positioning sensor is ON during standby.
215	Although the write pulse motor has completed the operation in sensor stop mode, the logical value of the sensor at the arrival point does not match the design value, or the operation fails to complete in counter stop mode within the specified time (faulty gate array control).
258	Master end sensor went OFF after detecting the master end tape, but the master end sensor detected the end tape again.

Error type	A02 [Master loading error] (Drum No.1)
Panel display	A02-*** Master Loading Error Pull Out Print Cylinder 1 and Discard Master
Error reset method	First print drum connection signal: ON -> OFF and first print drum safety SW: ON -> OFF << Pull out the print drum to cancel the error. >> * If the print drum is at position B when this error occurs, the print drum lock is automatically released.
Error point	Error detecting condition
509	The master loading sensor was OFF when the presence of master was checked at the specified angle during master-loading operation.

Error type	A04 [Master removal error] (Drum No.1)
Panel display	A04-*** Master Disposal Error Pull Out Print Cylinder 1 and Discard Master
Error reset method	First print drum connection signal: ON -> OFF and first print drum safety SW: ON -> OFF << Pull out the print drum to cancel the error. >> * If the print drum is at position B when this error occurs, the print drum lock is automatically released.
Error point	Error detecting condition
303	Print drum check request when the master removal error or removed master jam detected.

Error type	A05 [Master present in master removal section] (Drum No.1)
Panel display	A05-*** Master Jammed in Disposal Unit Pull Out Master Disposal Box 1 and Remove Jammed Master
Error reset method	First master disposal box safety SW: OFF and first master disposal jam sensor: OFF << When the master disposal box is pulled out, the error is cancelled if the master has been removed. >> (Or switch power OFF, then ON.)
Error point	Error detecting condition
304	Master disposal box check request when Master removal error or removed master jam detected.
312	The master disposal jam sensor was ON at the start of the master-making operation.
315	The master disposal jam sensor was ON at the completion of the recovery operation.

Error type	A06 [Paper feed tray check]
Panel display	A06-*** Safety SW on Standard Feed Tray is Activated Reset paper on Standard Feed Tray
Error reset method	Paper feed tray upper safety SW: ON or Paper feed tray lower safety SW: ON (Or switch power OFF, then ON.)
Error point	Error detecting condition
403	The paper feed tray safety switch is OFF.

Error type	A16 [Awaiting removal of master] (Drum No.1)
Panel display	A16-*** Master Remains on Print Cylinder 1 Pull Out Print Cylinder 1 and Remove Master
Error reset method	First print drum connection signal: ON -> OFF and first print drum safety SW: ON -> OFF << Pull out the print drum to cancel the error. >> * If the print drum is at position B when this error occurs, the print drum lock is automatically released.
Error point	Error detecting condition
525	Waiting for master to be removed.

Error type	A17 [Cutter error]
Panel display	A17-*** System Error in Master Making Unit Take Out Master and then Close Master Making Unit Cover
Error reset method	Master-making unit sensor: OFF -> ON and Master detection sensor: OFF << When the master making unit cover is closed without a master, the error is cancelled. >>
Error point	Error detecting condition
209	The cutter home position switch is OFF when the machine enters standby, at the start of the master-making operation, or when the master material is set.

Error type	A34 [Awaiting master reset]
Panel display	A34-*** Master Not Set in Place Insert Lead Edge of Master into Master Entrance and Close Master Making Unit
Error reset method	Master-making unit sensor: OFF -> ON and Master positioning sensor: OFF << When the master material is re-inserted, the error is cancelled. >>
Error point	Error detecting condition
218	Requesting the reset of master material.

Error type	A42 [Master loading error] (Drum No. 2)
Panel display	A42-*** Master Loading Error Pull Out Print Cylinder 2 and Discard Master
Error reset method	Second print drum connection signal: ON -> OFF and second print drum safety SW: ON -> OFF << Pull out the print drum to cancel the error. >> * If the print drum is at position B when this error occurs, the print drum lock is automatically released.
Error point	Error detecting condition
509	The master loading sensor was OFF when the presence of master was checked at the specified angle during master-loading operation.

Error type	A44 [Master removal error] (Drum No. 2)
Panel display	A44-*** Master Disposal Error Pull Out Print Cylinder 2 and Discard Master
Error reset method	Second print drum connection signal: ON -> OFF and second print drum safety SW: ON -> OFF << Pull out the print drum to cancel the error. >> * If the print drum is at position B when this error occurs, the print drum lock is automatically released.
Error point	Error detecting condition
303	Print drum check request when the master removal error or removed master jam detected.

Error type	A45 [Master present in master removal section] (Drum No. 2)
Panel display	A45-*** Master Jammed in Disposal Unit Pull Out Master Disposal Box 2 and Remove Jammed Master
Error reset method	Second master disposal box safety SW: OFF and second master disposal jam sensor: OFF << When the master disposal box is pulled out, if the master has been removed, the error is cancelled. >> (Or switch power OFF, then ON.)
Error point	Error detecting condition
304	Master disposal box check request when Master removal error or removed master jam detected.
312	The master disposal jam sensor was ON at the start of the master-making operation.
315	The master disposal jam sensor was ON at the completion of the recovery operation.

Error type	A56 [Awaiting removal of master] (Drum No. 2)
Panel display	A56-*** Master Remains on Print Cylinder 2 Pull Out Print Cylinder 2 and Remove Master
Error reset method	Second print drum connection signal: ON -> OFF and second print drum safety SW: ON -> OFF << Pull out the print drum to cancel the error. >> * If the print drum is at position B when this error occurs, the print drum lock is automatically released.
Error point	Error detecting condition
525	Waiting for the master to be removed.

2-2. Jam errors (A**: Indicates the detail of J-type error)

Error type	A07 [Paper feed error]
Error point	Error detecting condition
409	The central transport sensor was OFF when the paper reached the central transport sensor, and the paper feed sensor was ON when the operation stopped (paper feed error).
412	The paper feed sensor switched OFF consecutively for n number of times at the time of the initial paper feed jam detection (no-paper feed error).
413	The paper feed sensor was ON when the paper left the paper feed sensor (extra-long paper error). Or the fuse for the Second paper feed motor is burnt.
418	The paper feed sensor was ON at the start of the operation.
443	The registration sensor was OFF at the time the paper reached the registration sensor.
444	The registration sensor was ON even though there was no paper.

Error type	A08 [Paper jam] (Drum No. 1)
Error point	Error detecting condition
410	The central transport sensor was OFF at the timing when the paper should have arrived at the central transport sensor, and the Paper sensor was OFF when the machine stopped. (Either a paper jammed on the drum or the fuse for the Second paper feed motor is burnt).

Error type	A09 [Paper ejection error]
Error point	Error detecting condition
411	The paper ejection sensor was ON when the paper left the paper ejection sensor. Or the fuse for the Second paper feed motor is burnt.
417	The paper ejection sensor was ON at the start of the operation.

Error type	A10 [AF original feed error]
Error point	Error detecting condition
102	Original jam error resulting from pulled-out original. - The original IN sensor switched OFF while the original registration sensor and the original IN sensor were ON during scanning. - The original ejection sensor switched OFF before completion of scanning (prior to SIG_C output). - The original registration sensor switched OFF from the time of completion of leading edge insertion operation to the time of scanning start. * Error issued from AF.
103	Original jam at the AF registration sensor (extra-long paper error). Simplex AF: The original registration sensor fails to switch OFF after the original IN sensor switched ON. Duplex AF: AF registration sensor did not go OFF after the original started to feed. * Error issued from AF.
105	Original jam at the original IN sensor The original IN sensor fails to switch OFF after the original registration sensor switched OFF (max: movement of 84 mm). * Error issued from AF.
106	Original jam at the original OUT sensor Simplex AF: The original OUT sensor fails to switch OFF after the original IN sensor switched OFF. Duplex AF: The original OUT sensor fails to switch OFF after the original registration sensor switched OFF. * Error issued from AF.
107	Original registration sensor non-arrival jam Original fails to reach the original registration sensor after the feed operation started. * Error issued from AF.
108	Original IN sensor non-arrival jam Original fails to reach the original IN sensor after the scanning operation started (max.: movement of 42 mm). * Error issued from AF.
109	Original OUT sensor non-arrival jam Simplex AF: Original fails to reach the original OUT sensor after the original IN sensor switched ON. Duplex AF: Original fails to reach the original OUT sensor after the original started to feed. * Error issued from AF.
169	Original jammed in the AF unit due to the reason that the AF unit was opened during the operation.
178	Original flipper sensor non-arrival jam Original fails to reach the Original flipper sensor after the original was fed. * Only on Duplex AF.
179	Original jam at the original flipper sensor. Original flipper sensor fails to switch OFF after the original was fed. * Only on Duplex AF.
180	Gap between the originals not constant. * Only on Duplex AF.

Error type	A25 [Central transport error]
Error point	Error detecting condition
419	The central transport sensor was ON at the start of the operation.
441	The central transport sensor was ON at the timing the paper should have left the central transport sensor (central transport error).
447	The paper ejection sensor did not detect the paper at the timing when the paper should have arrived, and when the machine stops, the central transport sensor was ON (central transport error).
455	Central transport error (during the recovery movement).

Error type	A48 [Paper jam] (Drum No. 2)
Error point	Error detecting condition
410	The paper ejection sensor was OFF at the timing when the paper should have arrived to the sensor and when the machine stopped, the central transport sensor was OFF. (Paper jammed on Drum No.2)

3. Option errors (B**)

Error type	B01 [Card counter: No card]
Panel display	B01-*** Insert Card in Key/Card Counter
Error reset method	Insert the card.
Error point	Error detecting condition
730	Card counter: No card

Error type	B21 [Storage memory: Read/write error]
Panel display	B21-*** !!System Error!! Turn Main Power SW OFF Then ON If Recovery has Failed, Call Service
Error reset method	Switch power OFF, then ON.
Error point	Error detecting condition
715	Storage memory access error.

Error type	B22 [Job separator: Power OFF]
Panel display	B22-*** !! Job Separator is OFF !! Turn On Power Switch of it
Error reset method	Press the Reset key. (Confirm that the job separator is switched ON.)
Error point	Error detecting condition
721	With the tape separation setting switched ON, the job separator is in a Power OFF state when the Start key is pressed.
727	The BUSY signal remains at <L> (power switches OFF during job separator tape output) for more than 7 seconds after the cluster-A signal switches ON.

Error type	B23 [Job separator: No-tape error]
Panel display	B23-*** No Paper Tape in Job Separator Replace Tape Roll
Error reset method	Press the Reset key. (Confirm that the job separator is switched ON.)
Error point	Error detecting condition
722	With the BUSY signal at <H> (Power ON) and the tape separation setting switched ON, the tape detection signal is at <H> (no tape) when the Start key is pressed.
723	The tape detection signal is at <H> (no tape) after the tape output command is issued, and the BUSY signal changed from <L> to <H> (after completion of operation).

Error type	B24 [Job separator: Jam error]
Panel display	B24-*** Paper Tape Jam in Job Separator Remove Paper Tape
Error reset method	Press the Reset key. (Confirm that the job separator jam is reset.)
Error point	Error detecting condition
724	With the BUSY signal at <H> (Power ON) and the tape separation setting switched ON, the tape detection signal is at <L> (tape remaining) when the Start key is pressed.
725	The tape jam detection signal remains at <H> for more than 1.2 seconds after cluster-A signal switched ON (tape transport error).
726	The tape jam detection signal was at <L> when the BUSY signal changed from <L> to <H> or it remains at <L> for more than 7 seconds after the cluster-A signal switched ON (tape ejection error).

Error type	B29 [USB Memory: Incompatible Device (HUB)]
Panel display	B29-*** Unable to Recognize (HUB) Remove Paper Tape
Error reset method	Touch [Close] button, Press the Reset key, or remove the USB device.
Error point	Error detecting condition
926	USB-HUB is inserted.

Error type	B30 [USB Memory: Non-Compliant Device]
Panel display	B30-*** Unable to Recognize Remove Paper Tape
Error reset method	Touch [Close] button, Press the Reset key, or remove the USB device.
Error point	Error detecting condition
910	Non-Compliant USB device is inserted.

Error type	B31 [Network cable not connected]
Panel display	B31-*** !! No Linked Printer Detected !! Check Cable Connection and Power Supply for Linked Printer
Error reset method	Press the Reset key.
Error point	Error detecting condition
916	The network cable was not connected when the machine starts up.
920	Error detected by NET-D (NAK received). * No response from communication destination, interruption by communication destination, TCP/IP not operating in the NET-D, or unauthorized interrupt received from the main unit, etc.

Error type	B32 [NIC: External communication error]
Panel display	B32-*** !! No Linked Printer Detected !! Check Cable Connection and Power Supply for Linked Printer
Error reset method	Press the Reset key. << Remove the cause of the error in the printer to cancel the error. >>
Error point	Error detecting condition
914	MIB information request error. * Transmission not possible after waiting 3 seconds (WAK), no response from communication destination, interruption by communication destination, TCP/IP not operating in the NET-D, or unauthorized interrupt received from the main unit, etc.
915	No MIB information returned. * No response from the NET-D (communication destination) for 50 seconds (error detected in main unit).
917	Network communication error.

Error type	B33 [IP address setup error]
Panel display	B33-*** No IP Address Assigned to This Printer Contact Your Network Administrator
Error reset method	Press the Reset key.
Error point	Error detecting condition
931	The DHCP is ON, but the DHCP server cannot be found.

Error type	B34 [RLP: No-toner error]
Panel display	B34-*** No Toner in Linked Printer
Error reset method	Press the Reset key.
Error point	Error detecting condition
919	No toner in the linked printer.

Error type	B35 [RLP: Service error]
Panel display	B35-*** Linked Printer in Error
Error reset method	Press the Reset key.
Error point	Error detecting condition
970	Service error in the linked printer.

Error type	B38 [USB Memory: Folder making error]
Panel display	B38-*** USB Memory Folder Error
Error reset method	Touch [Close] button, Press the Reset key, or remove the USB device.
Error point	Error detecting condition
911	Error in making RISO Folder.

Error type	B39 [USB Memory: Read/Write error]
Panel display	B39-*** USB Memory Read/Write Error
Error reset method	Touch [Close] button, Press the Reset key, or remove the USB device.
Error point	Error detecting condition
999	Error in USB file system.

4. Consumable errors (C**)

Error type	C01 [Ink cartridge replacement] (Drum No. 1)
Panel display	C01_*** No Ink in Print Cylinder 1 Replace Ink Cartridge
Error reset method	First ink cartridge set SW: OFF -> ON << Install a new ink cartridge to cancel the error. >> Or first print drum safety SW: OFF, first print drum connection signal: OFF, and first print drum lock sensor: OFF << Pull out the print drum to cancel the error. >>
Error point	Error detecting condition
512	The ink sensor does not switch ON when the inking operation is conducted for the set time (inkless).
563	The remaining volume information in the ink tag reached the maximum value.
574	Inkless error was generated 5 times for the same ink cartridge.

Error type	C02 [Master roll replacement]
Panel display	C02_*** No Master Replace Master Roll
Error reset method	Master-making unit sensor: OFF -> ON << Open and close the master-making unit to cancel the error. >>
Error point	Error detecting condition
200	The 10-ms-interval master end check detected 2 consecutive times during the master transport.
240	The remaining volume information in the master tag reached the maximum value.
253	[No-master] error was generated twice for the same master.

Error type	C03 [Master disposal box full (Drum No. 1)
Panel display	C03_*** Master Disposal Box 1 is Full Empty Master Disposal Box
Error reset method	Switch OFF the first master disposal box sensor OFF, then turn ON after waiting at least 5 seconds.
Error point	Error detecting condition
308	After the master compression motor activates in the compressing direction, the compression detection switches ON before the FG count exceeds the specified volume.
311	The master compression software counter reached the full detection set count.

Error type	C04 [No-paper error]
Panel display	C04_*** Add Paper
Error reset method	The paper detection sensor is ON.
Error point	Error detecting condition
402	The paper detection sensor is OFF.

Error type	C05 [Both master disposal boxes full]
Panel display	C05_*** Master Disposal Box 1 and 2 are Full Empty Both Master Disposal Boxes
Error reset method	Switch OFF the first master disposal box sensor, then switch it back ON after waiting at least 5 seconds. Switch OFF the second master disposal box sensor, then switch ON after waiting at least 5 seconds.
Error point	Error detecting condition
317	After the master compression motor on the first print drum side or second print drum side begins to apply a compression force, the compression detection activates and the other disposal box exceeds 90% capacity before the FG count exceeds the specified volume (Expected disposal box full).

Error type	C41 [Ink cartridge replacement] (Drum No. 2)
Panel display	C41_*** No Ink in Print Cylinder 2 Replace Ink Cartridge
Error reset method	Second ink cartridge set SW: OFF -> ON << Install a new ink cartridge to cancel the error. >> Or second print drum safety SW: OFF, second print drum connection signal: OFF, and second print drum lock sensor: OFF << Pull out the print drum to cancel the error. >>
Error point	Error detecting condition
512	The ink sensor does not turn ON when inking is performed for the set time (inkless).
563	The remaining volume information in the ink tag reached the maximum value.
574	An inkless error was generated 5 consecutive times for the same ink cartridge.

Error type	C43 [Master disposal box full] (Drum No. 2)
Panel display	C43_*** Master Disposal Box 2 is Full Empty Master Disposal Box
Error reset method	Switch OFF the second master disposal box sensor, then switch back ON after waiting at least 5 seconds.
Error point	Error detecting condition
308	After the master compression motor activates in the compressing direction, the compression detection switches ON before the FG count exceeds the specified volume.

5. Set check errors (D**)

Error type	D01 [Print drum not installed] (Drum No. 1)
Panel display	D01-*** Set Print Cylinder in Place
Error reset method	First print drum safety SW: ON, first print drum connection signal: ON, and first print drum lock sensor: ON << Install the print drum to clear the error. >>
Error point	Error detecting condition
526	The print drum is removed. (The connection signal, safety SW, and lock sensor are OFF.)
527	The print drum connection signal is OFF after the print drum is installed.
528	The print drum safety switch is OFF after the print drum is installed.
529	The print drum lock sensor is OFF after the print drum is installed (time-out during insertion: 5 sec).
530	The print drum connection signal does not switch OFF within 5 seconds after the print drum safety switch switches OFF, when the print drum is removed.
581	The drum safety switch turned OFF during machine operation.

Error type	D02 [Print drum incompatibility] (Drum No. 1)
Panel display	D02-*** Wrong-Type Print Cylinder Installed in Cylinder Position 1 Replace with Correct Type
Error reset method	Replace with the correct print drum. (The print drum code must match the machine model.)
Error point	Error detecting condition
532	The print drum is incompatible. (Drum code not correct)
580	The print drum is incompatible. (Drum style not correct)

Error type	D03 [Ink cartridge not installed] (Drum No. 1)
Panel display	D03-*** Install Ink Cartridge in Print Cylinder 1
Error reset method	First ink cartridge set SW: ON
Error point	Error detecting condition
533	The ink cartridge set switch is OFF.

Error type	D04 [Ink cartridge incompatibility] (Drum No. 1)
Panel display	D04-*** Wrong-type Ink Cartridge Installed in Cylinder 1 or Cannot Read Ink Info Replace Ink Cartridge or Contact Dealer/Riso Office
Error reset method	Replace with a correct ink cartridge.
Error point	Error detecting condition
534	The ink cartridge is incompatible.
560	Error due to missing ink cartridge tag.
561	Ink tag communication error (tag communication error due to noise).
562	Abnormal ink tag information. Checksum error, verification error, storage of master information, etc.
564	Serial number mismatch detected during the periodic ink tag serial number check.
575	Software error involving ink tag. Antenna CH selection error, erroneous writing of data to write-protected area.

Error type	D05 [Master not installed]
Panel display	D05-*** Set Master in Place
Error reset method	Master-making unit sensor: OFF << Open the master-making unit to clear the error. >>
Error point	Error detecting condition
210	The master detection sensor is OFF.

Error type	D07 [Master disposal box not installed] (Drum No. 1)
Panel display	D07-*** Set Master Disposal Box 1 in Place
Error reset method	First master disposal box safety SW: ON << Install the master disposal box to clear the error. >>
Error point	Error detecting condition
310	The master disposal box safety switch is OFF.

Error type	D08 [Master-making unit not installed]
Panel display	D08-*** Set Master Making Unit in Place
Error reset method	With the master-making unit removed, the second master-loading sensor or the master-making unit pull-out position sensor is ON, and the cover safety SW is OFF. << Install the master-making unit into the main unit to clear the error. >>
Error point	Error detecting condition
224	The master-making unit is in the pulled-out condition (safety switch, lock sensor OFF).

Error type	D09 [Master-making unit not cover closed]
Panel display	D09-*** Close Master Making Unit Cover
Error reset method	Master-making unit sensor: ON << Close the master-making unit to clear the error. >>
Error point	Error detecting condition
212	The master-making unit Top cover set sensor is OFF.

Error type	D11 [Front cover not closed]
Panel display	D11-*** Close Front Cover
Error reset method	Front cover safety SW: ON
Error point	Error detecting condition
535	The front cover safety switch is OFF.

Error type	D13 [Machine rear cover not closed]
Panel display	D13-*** Rear Cover of Main Body is Off Call Service
Error reset method	Rear cover safety SW: ON
Error point	Error detecting condition
009	The rear cover of the main unit is not closed. (The rear cover safety switch is OFF.)

Error type	D17 [Master incompatibility]
Panel display	D17-*** Wrong-type Master Installed or Cannot Read Master Info Replace Master Roll or Contact dealer/Riso office
Error reset method	Master-making unit safety SW: ON -> OFF and Master-making unit lock sensor: ON -> OFF << Pull out the master-making unit to clear the error. >>
Error point	Error detecting condition
236	The master is incompatible.
237	Error due to missing master tag.
238	Master tag communication error (tag communication error due to noise).
239	Abnormal master tag information. Checksum error, verification error, storage of ink information, etc.
241	Serial number mismatch detected during the periodic master tag serial number check.
256	Software error involving master tag. Antenna CH selection error, erroneous writing of data to write-protected area.

Error type	D18 [Print drum ready to pull-out] (Drum No. 1)
Panel display	D18-*** Print Cylinder 1 has been Unlocked
Error reset method	First print drum connection signal: ON -> OFF and first print drum safety SW: ON -> OFF << Pull out the print drum to clear the error. >> Or Front cover set SW: ON << Close the front cover to clear the error. >> Or master-making unit release button: ON << Press the master-making unit release button to clear the error. >>
Error point	Error detecting condition
522	The print drum is in the pull-out position. (The print drum lock solenoid is ON.)

Error type	D19 [Master-making unit ready to pull out]
Panel display	D19-*** Master Making Unit has been Unlocked
Error reset method	Second master-loading sensor: OFF; Master-making unit pull-out position sensor: OFF; and Cover safety SW: OFF Or master-making unit drawer cover safety SW: OFF -> ON
Error point	Error detecting condition
223	The master-making unit is in the pull-out position (The master making unit lock solenoid ON).

Error type	D20 [Master-making unit drawer cover not closed]
Panel display	D20-*** Close Master Making Unit Access Cover
Error reset method	Master-making unit drawer cover safety SW: OFF -> ON
Error point	Error detecting condition
254	The master-making unit drawer cover is not in position. (Master-making unit removed (second master-loading position sensor: ON or master-making unit pull-out position sensor: ON) and cover safety SW: OFF)

Error type	D21 [Master-making unit drawer cover ready to open]
Panel display	D21-*** Ready to Open Master Making Unit Access Cover
Error reset method	Master-making unit drawer cover safety SW: ON -> OFF Or Pull-out position sensor: ON -> OFF
Error point	Error detecting condition
255	The master-making unit drawer cover ready to open. (Master-making unit pull-out position sensor: ON and Cover safety SW: ON)

Error type	D22 [Print drum pull-out command] (Drum No. 1)
Panel display	D22-*** Print Cylinder 1 is not Set in Place Press Cylinder Release Button and Pull Out Print Cylinder Once after Button Lights
Error reset method	First print drum safety SW: OFF; first print drum connection signal: OFF; and first print drum lock sensor: OFF
Error point	Error detecting condition
531	The print drum lock sensor is ON when the print drum lock solenoid is ON. (The check is performed 100 ms after the print drum lock solenoid switches ON.)
540	Data cannot be written to or read from the EEPROM on the print drum. (EEPROM cannot be accessed.)
542	CRC error in the EEPROM on the print drum (data error in the EEPROM).
577	The print drum is not set into position properly.

Error type	D23 [AF Feed cover opened]
Panel display	D23_*** AF Feed Cover Opened Close AF Feed Cover
Error reset method	Set switch ON
Error point	Error detecting condition
177	The original feed cover of the Duplex AF Unit is opened.

Error type	D28 [D to P delete job Drum not in position] (Print Drum No.1)
Panel display	D28_*** Two Color Print Job Received Set Drum No.1 in Position
Error reset method	Set the print drum in position and delete the print job.
Error point	Error detecting condition
573	Specified print drum for D to P (data to print from PC) is not set in position.

Error type	D30 [Front cover setting demand]
Panel display	D30_*** Starting Recovery Action Close Front Cover
Error reset method	Front cover SW: ON
Error point	Error detecting condition
576	The front cover is not in position when a single print drum is set into place in position and the print drum removal button is pressed without the print drum at position B.

Error type	D41 [Print drum not installed] (Drum No. 2)
Panel display	D41-*** Set Print Cylinder 2 in Place
Error reset method	Second print drum safety SW: ON, second print drum connection signal: ON, and second print drum lock sensor: ON << Install the print drum to clear the error. >>
Error point	Error detecting condition
526	The print drum has been pulled out. (The connection signal, safety SW, and lock sensor are OFF.)
527	The print drum connection signal is OFF after the print drum is installed.
528	The print drum safety switch is OFF after the print drum is installed.
529	The print drum lock sensor is OFF after the print drum is installed (time-out during insertion: 5 sec).
530	The print drum connection signal does not switch OFF within 5 seconds after the print drum safety switch switched OFF when the print drum is removed.
581	The print drum safety switch turned OFF during machine operation.

Error type	D42 [Print drum incompatibility] (Drum No. 2)
Panel display	D42-*** Wrong-Type Print Cylinder Installed in Cylinder Position 2 Replace with Correct Type
Error reset method	Replace with the correct print drum. (The print drum code must match the machine model.)
Error point	Error detecting condition
532	The print drum is incompatible. (Drum code is not correct)
580	The print drum is incompatible. (Drum style is not correct)

Error type	D43 [Ink cartridge not installed] (Drum No. 2)
Panel display	D43-*** Install Ink Cartridge in Print Cylinder 2
Error reset method	Second ink cartridge set SW: ON
Error point	Error detecting condition
533	The ink cartridge set switch is OFF.

Error type	D44 [Ink cartridge incompatibility] (Drum No. 2)
Panel display	D44-*** Wrong-type Ink Cartridge Installed in Cylinder 2 or Cannot Read Ink Info Replace Ink Cartridge or Contact Dealer/Riso Office
Error reset method	Replace with the correct ink cartridge.
Error point	Error detecting condition
534	The ink cartridge is incompatible.
560	Error due to missing ink cartridge tag.
561	Ink tag communication error (tag communication error due to noise).
562	Abnormal ink tag information. Checksum error, verification error, storage of master information, etc.
564	Serial number mismatch detected during periodic ink tag serial number check.
575	Software error involving ink tag. Antenna CH selection error, erroneous writing of data to write-protected area.

Error type	D47 [Master disposal box not installed] (Drum No. 2)
Panel display	D47-*** Set Master Disposal Box 2 in Place
Error reset method	Second master disposal box safety SW: ON << Install the master disposal box to clear the error. >>
Error point	Error detecting condition
310	The master disposal box safety switch is OFF.

Error type	D58 [Print drum ready to pull-out] (Drum No. 2)
Panel display	D58-*** Print Cylinder 2 has been Unlocked
Error reset method	Second print drum connection signal: ON -> OFF and second print drum safety SW: ON -> OFF << Pull out the print drum to clear the error. >> Or front cover SW: ON << Close the front cover to clear the error. >> Or master-making unit release button: ON << Press the master-making unit release button to clear the error. >>
Error point	Error detecting condition
522	The print drum is in the pull-out position. (The print drum lock solenoid is ON.)

Error type	D62 [Print drum pull-out command] (Drum No. 2)
Panel display	D62-*** Print Cylinder 2 is not Set in Place Press Cylinder Release Button and Pull Out Print Cylinder Once after Button Lights
Error reset method	Second print drum safety SW: OFF; second print drum connection signal: OFF; and second print drum lock sensor: OFF
Error point	Error detecting condition
531	The print drum lock sensor is ON when the print drum lock solenoid is ON. (The check is performed 100 ms after the print drum lock solenoid switches ON.)
540	Data cannot be written to or read from the EEPROM on the print drum. (EEPROM cannot be accessed.)
542	CRC error in the EEPROM on the print drum (data error in the EEPROM).
577	The print drum is not set in position properly.

Error type	D68 [D to P delete job Drum not in position] (Print Drum No.2)
Panel display	D68-*** Two Color Print Job Received Set Drum No.2 in Position
Error reset method	Set the print drum in position and delete the print job.
Error point	Error detecting condition
573	Specified print drum for D to P (data to print from PC) is not set in position.

6. Warning (E**: Service engineer call)

Error type	E01 [Battery replacement]
Panel display	E01-*** !!Battery Replacement!! Call Service
Error reset method	Press the Reset key.
Error point	Error detecting condition
010	Battery voltage is below 2.1 V when power is switched ON (replacement of battery required). * Since the battery voltage detected by the software is 0.5 V below the actual battery voltage, error detection activates when the value set in the RTC is below 1.6 V. * Precautions for battery replacement Switch ON main power before replacing the battery. If the battery is replaced with the main unit OFF the following two problems may occur: The internal clock data will be incorrect. -> Reset the clock. The <T25-026 No-battery> error will be issued once again when power is switched ON after battery replacement. -> Switch power OFF, then ON again, and confirm that no error is issued.

Error type	E02 [Maintenance call]
Panel display	E02-*** !!Maintenance!! Call Service
Error reset method	Press the Reset key.
Error point	Error detecting condition
011	The master count reached the value set in the Test Mode at power ON, reset, or at operation completion (maintenance call).
012	The copy count reached the value set in the Test Mode at power ON, reset, or at operation completion (maintenance call).
022	The maintenance count in the print drum reached the value set in the Test Mode at power ON, reset, or at operation completion (maintenance call).

7. Warning (F**: Others)

Error type	F01 [No master on Drum No. 1]
Panel display	F01_*** No Master on Print Cylinder 1 Make a New Master
Error reset method	Press the Reset key. Set an original and execute the master-making operation.
Error point	Error detecting condition
015	There is no master on the print drum at the start of printing.

Error type	F02 [Paper/master-making size incompatibility 1]
Panel display	F02_*** Page Format is Larger than Paper Size !! Possible Ink Smudges on Prints !!
Error reset method	Press the Continue button or Stop button (Check print paper size).
Error point	Error detecting condition
018	Paper and master-making sizes (master image size on print drum) do not match at the start of printing.

Error type	F03 [Multi-up: Paper size error]
Panel display	F03_*** !! Multi-Up is Not Available with This Paper Size !! Replace with Proper Paper of Standard Size
Error reset method	Touch [Close] button, or press Stop button. Set proper standard-size paper on the paper feed tray.
Error point	Error detecting condition
016	The multi-up operation was executed with nonstandard (customs size) paper.
Error type	F04 [Admin. Setting: Maximum setting reached]
Panel display	F04_*** !! Reached Maximum Count !! Cannot Continue
Error reset method	Touch [Close] button, press Stop key, or press Reset key.
Error point	Error detecting condition
905	The master-making count reached the maximum count.
906	The print count reached the maximum count.

Error type	F06 [N-Up: Incorrect paper size]
Panel display	F06-*** !! N-Up is Not Available with This Paper Size !! Replace with Proper Paper of Standard Size
Error reset method	Press the Close button. Set standard-size paper on the paper feed tray.
Error point	Error detecting condition
004	The multi-up operation was executed with nonstandard (customs size) paper.

Error type	F07 [N-Up: Incorrect original size]
Panel display	F07-*** !! Multi-Up is Not Available with This Original Size !! Replace with Original of Proper Size
Error reset method	Press the Reset button or Stop button. Use correct size original.
Error point	Error detecting condition
023	N-Up operation was executed with wrong size original or custom size original.

Error type	F09 [Booklet: Incorrect paper size]
Panel display	F09-*** !! Booklet is Not Available with This Paper Size !! Replace with Original of Proper Size
Error reset method	Touch [Close] button, or press Stop button. Set proper standard-size paper on the paper feed tray.
Error point	Error detecting condition
810	Booklet operation was executed with wrong size non-standard (customs size) paper.

Error type	F10 [Paper/master-making size incompatibility 2]
Panel display	F10-*** Page Format is Larger than Paper Size !! Possible Ink Smudges on Prints !! (Continue->PROOF Key)
Error reset method	Press the Continue button or Stop button. (Check print paper size.)
Error point	Error detecting condition
021	Paper and master-making sizes (image size on print drum) do not match at the start of proof printing.

Error type	F11 [Auto size reproduction disabled (falls outside range of possible size reproduction)]
Panel display	F11-*** !! Original Size Exceeds Limitation of Booklet !! Specify the original size
Error reset method	Press the Reset key or Stop key.
Error point	Error detecting condition
717	When Booklet was selected, the original size was out of range or not in standard size.

Error type	F13 [4P Booklet was selected with wrong size paper on the paper feed tray]
Panel display	F13-*** !! 4P booklet is not available with this paper size !! Replace with proper paper of standard size
Error reset method	Touch the [Close] key, or press the Reset or Stop key. Place appropriate size paper on feed tray.
Error point	Error detecting condition
718	4P Booklet was selected with non-standard size paper on the paper feed tray.

Error type	F14 [4P Booklet was selected with wrong size original]
Panel display	F14-*** !! Original size exceeds limitation of 4P booklet !! Specify the original size
Error reset method	Press the Reset or Stop key.
Error point	Error detecting condition
719	When Booklet was selected, the original size was out of range or not in standard size.

Error type	F20 [Binding margin: Wrong paper size]
Panel display	F20-*** !! Reproduction Cannot be made with this paper size !! Replace with proper paper of standard size
Error reset method	Touch the [Close] key, or press the Reset or Stop key. Place appropriate size paper on feed tray.
Error point	Error detecting condition
30	Wrong size paper or non-standard size paper is used for Binding margin with auto reduce-reproduction enabled.

Error type	F24 [Auto size reproduction disabled (falls outside range of possible size reproduction)]
Panel display	F24-*** !! Images may not fit in Frame of Paper with This Reproduction Size !! Re-perform the size setting
Error reset method	Press the Reset key. (Manually enter the size reproduction setting.)
Error point	Error detecting condition
037	Size reproduction setting falls outside the permissible range when the operation started based on the auto size reproduction setting.

Error type	F30 [Multiple feed check]
Panel display	F30-*** !! Possible Multiple Paper Feed !! Check Printed Copies
Error reset method	Press the Multiple Feed Detection OFF button or Reset key.
Error point	Error detecting condition
425	Multiple feed with the first sheet.
426	Multiple feed.

Error type	F32 [Storage memory: No space available]
Panel display	F32-*** !! The Data Storage Area has Become Full !! Clear Old Storage Data
Error reset method	Press the Reset key. (Check the available capacity.)
Error point	Error detecting condition
713	Inadequate storage memory during data write.

Error type	F33 [Storage memory: No space available]
Panel display	F33-*** !! The file size is too large to store on USB flash drive !! Change the USB flash drive or delete some files to make spaces
Error reset method	Touch the [Cancel] key, or press the Reset or Stop key.
Error point	Error detecting condition
913	Inadequate USB flash drive memory during data write.

Error type	F37 [Combined use of book mode and AF not possible]
Panel display	F37-*** !! Book Shadow Editor is Not Available with ADF !! Place Original on Stage Glass
Error reset method	Press the Close button.
Error point	Error detecting condition
050	With book mode set, an original was found on the AF at the start of the master-making operation.

Error type	F43 [DtoP original/paper incompatibility]
Panel display	F43-*** !! Unmatched Size-- Current Page and Printing Paper !! Check Paper Size
Error reset method	Press the Continue button or Stop button. (Check print paper size.)
Error point	Error detecting condition
902	Paper and original sizes do not correspond at the start of DtoP master-making.

Error type	F44 [Auto size reproduction disabled (exceeds original size detection range)]
Panel display	F44-*** !! No Auto Reproduction with This Original and Printing Paper !! Select Size Manually
Error reset method	Touch the [Cancel] key, or press the Reset or Stop key. (Manually enter the size reproduction setting.)
Error point	Error detecting condition
901	The original size detection failed. (The original did not conform to the detection specification.)

Error type	F45 [Presence of original unknown/no original]
Panel display	F45-*** Original Undetected Reset Original
Error reset method	Reset the original. Press the Continue button or Stop button.
Error point	Error detecting condition
954	Master-making operation or RLP output was executed with the auto tray or auto size reproduction setting set to ON, and the presence of an original could not be detected.
959	Master-making operation or RLP output was executed without an original.
981	When the Next button was clicked on the multi-up count entry screen of Multi-up Wizard, no original was detected.

Error type	F46 [Print drum color not matching with DtoP job color] (Drum No. 1)
Panel display	F46-*** !! Unmatched Color -- Data Color and Cylinder Color 1 !! Change Print Cylinder Color: (Color name)
Error reset method	Press the Reset key or the Continue button. (Replace the print drum.)
Error point	Error detecting condition
903	The color of the print drum fails to match between the color specified for DtoP job and the color set for the specified print mode.

Error type	F47 [Combined use of AF and postcard size reproduction not possible]
Panel display	F47-*** [A4->Card] Reproduction is Not Available in combination with ADF Place Original on Stage Glass
Error reset method	Remove the original from the AF and press the Close button.
Error point	Error detecting condition
904	Master-making operation or RLP output was performed with <A4 to Postcard> size reproduction selected and original set on the AF.

Error type	F48 [Multi-up: Outside original size detection range]
Panel display	F48-*** Original Size Exceeds Limitation of Multi-Up Specify Original Size
Error reset method	Press the Reset key.
Error point	Error detecting condition
955	Multi-up is selected with non-applicable original size or customs size original.

Error type	F49 [Multi-up: No original when Start key pressed]
Panel display	F49-*** Original Undetected Reset Original
Error reset method	Press the Stop button.
Error point	Error detecting condition
989	No original is detected when the Enter key is pressed for the single original/multi-original multi-up setting.

Error type	F52 [Use of RLP mode not possible (RLP information not acquired)]
Panel display	F52-*** Acquiring Linked Printer Configuration Data Please Wait a Moment
Error reset method	Press the Close button.
Error point	Error detecting condition
912	RLP mode cannot be used. (RLP information has not been acquired.)

Error type	F58 [Use of RLP mode not possible (NET-D initialization in process)]
Panel display	F58-*** Starting Up RISORINC-NET Please Wait a Moment
Error reset method	Press the Close button.
Error point	Error detecting condition
927	RLP mode cannot be used. (The NET-D is being initialized.)

Error type	F60 [RLP auto-link/master-making continuation confirmation (when printing quantity is 0)]
Panel display	F60-*** !! Number of Copies is set to "0"!! Printing Operation will Start on this Printer (Continue -> START key)
Error reset method	Press the Start key or Stop button.
Error point	Error detecting condition
929	Confirmation of auto-link operation/master-making continuation (when printing quantity is 0).

Error type	F61 [RLP paper/original size incompatibility]
Panel display	F61-*** Set Proper Paper Size in the Linked Printer
Error reset method	Select paper using Manual Feed or Paper Selection.
Error point	Error detecting condition
930	RLP paper/original size is incompatible.

Error type	F62 [RLP auto-link/RLP error]
Panel display	F62-*** !!Auto-Link Operation is Not Available!! Specified Linked Printer may be in Error or Turned OFF
Error reset method	Press the Stop button
Error point	Error detecting condition
956	Error generated on the RLP side during RLP auto-link operation.

Error type	F63 [RLP auto tray selection/nonstandard-size original]
Panel display	F63-*** !! No Auto Paper Size Selection with Irregular Size Original !! Select Paper Size and then Restart
Error reset method	Press the Reset key. (Manually select paper.)
Error point	Error detecting condition
971	RLP output was performed with a nonstandard-size original and auto paper size selection.

Error type	F64 [Specified function disabled, at job reception]
Panel display	F64-*** Processing Print Data from PC This Function is Not Available while Process- ing Current Data
Error reset method	Press the Close button.
Error point	Error detecting condition
964	An instruction involving an exclusive function (scan mode, overlay, name insertion, digitizer, hold, easy separation) was issued for DtoP job reception, development, or awaiting-output status.

Error type	F65 [Scan mode auto-saving size selection/nonstandard-size original]
Panel display	F65-*** Auto Page Size Selection is Not Available for Irregular-Size Original Select Format Size to Store and then Restart
Error reset method	Press the Reset key. (Manually select storage size.)
Error point	Error detecting condition
965	The size selected in auto size (storage data) selection at the start of scanning operation was nonstandard.

Error type	F66 [RLP saddle stitching not possible]
Panel display	F66-*** Saddle Stitching is Not Available with This Paper Size
Error reset method	Press the Close button.
Error point	Error detecting condition
962	The paper in the specified paper feed tray was not A3, B4, or A4 (landscape) at the time of RLP output with saddle stitching function switched ON.

Error type	F67 [RLP rotation sorting not possible]
Panel display	F67-*** !! Improper Paper for Rotation Sorting !! Set Same Sized Paper in 2 Trays, One in Horizontal and Other in Vertical Direction
Error reset method	Press the Close button.
Error point	Error detecting condition
963	No paper of the size specified by the RLP Paper Tray is set in either portrait or landscape orientation at the time of RLP output with rotation sorting function switched ON.

Error type	F68 [Specified area/traced color separation: Excess number of specified areas]
Panel display	F68-*** !! Exceeding Number of Editing Areas Selected !! Deselect Some Areas and Redo Color Separation
Error reset method	Press the Reset key.
Error point	Error detecting condition
173	The number of specified areas for specified area/traced color separation exceeded the maximum value.

Error type	F69 [Specified area/traced color separation: Distance of border for specified area longer than master-making size]
Panel display	F69-*** Cannot Read Selection Area Reset Original Correctly
Error reset method	Press the Reset key.
Error point	Error detecting condition
174	The distance of the border of the specified area for specified area/traced color separation exceeds the length against the master being made.

Error type	F70 [Specified area/traced color separation: Image processing time-out error]
Panel display	F70-*** !! Complicated Area Form !! Re-circle Editing Areas and Redo Color Separation
Error reset method	Press the Reset key.
Error point	Error detecting condition
175	Image processing time-out error during specified area/traced color separation.

Error type	F71 [No master on Drum No. 2]
Panel display	F71-*** No Master on Print Cylinder 2 Make a New Master
Error reset method	Press the Reset key. Set an original and execute the master-making operation.
Error point	Error detecting condition
015	No master is found on the print drum at the start of printing.

Error type	F72 [Hand-written/red-color separation: Image processing time-out error]
Panel display	F72-*** !! Complicated Area Form !! Re-circle Editing Areas and Redo Color Separation
Error reset method	Press the Reset key.
Error point	Error detecting condition
176	Image processing time-out error during hand-written/hand-written (ink)/red-color separation.

Error type	F73 [Auto tray selection not possible, RLP tray designation disabled]
Panel display	F73-*** Paper Size cannot be Defined by Specified Reproduction Size Select Paper Size Manually
Error reset method	Select paper using Manual Feed or Paper Selection. Press the Reset key.
Error point	Error detecting condition
975	The specified fixed size reproduction and the detected original size do not match at the start of RLP. Or zoom/independent size reproduction was specified.

Error type	F74 [50ppm not possible due to low temperature]
Panel display	F74-*** Printer Temperature is Low <150ppm> is Not Available [Cancel] [Continue]
Error reset method	Press the Stop button or Continue button.
Error point	Error detecting condition
980	150ppm printing was selected at temperatures below 15°C while using the second print drum.

Error type	F75 [Combined use of specified area separation and AF not possible]
Panel display	F75-*** Specified Area Separation is Not Available in Combination with ADF Place Original on Stage Glass
Error reset method	Press the Reset key.
Error point	Error detecting condition
985	With specified area separation selected, an original was on the AF at the start of master-making.

Error type	F76 [Print drum color not matching with DtoP job color] (Drum No. 2)
Panel display	F76-*** !! Unmatched Color -- Data Color and Cylinder Color 2 !! Change Print Cylinder Color: (Color name)
Error reset method	Press the Reset key or Continue button. (Replace the print drum.)
Error point	Error detecting condition
903	The color of the print drum to be used fails to match with the DtoP job specified print color.

Error type	F77 [Print drum color not matching with DtoP job color] (Drum No. 1)
Panel display	F77-*** !! Unmatched Color -- Data Color and Cylinder Colors !! Change Print Cylinders Color: (Color name)
Error reset method	Press the Reset key or Continue button. (Replace the print drum.)
Error point	Error detecting condition
903	The color of the print drum to be used fails to match with the DtoP job specified color.

Error type	F78 [Digitizer: Stage cover open]
Panel display	F78-*** Close Stage Cover If original moves you may not get desired result
Error reset method	Close the stage cover. Press the Close button.
Error point	Error detecting condition
731	The stage cover was opened during the digitizing operation.

Error type	F79 [Digitizer: No original during rescanning]
Panel display	F79-*** Set Original and Press Start Key Re-scanning will be Started to Add Image Processing
Error reset method	Press the Start key or Stop button.
Error point	Error detecting condition
732	No original was detected at the start of digitizer re-scanning.

Error type	F80 [Paper not compatible with dual-color printing]
Panel display	F80-*** Dual-Color Printing is Not Available for This Paper Size Load Paper Larger than B5 (Portrait)
Error reset method	Press the Reset key. (Use paper larger than the minimum size.)
Error point	Error detecting condition
966	The paper size is smaller than the minimum paper size for dual-color printing.

Error type	F81 [Dual-color printing: Ink-saving setting only for one print drum]
Panel display	F81-*** Either of Masters is Made in Ink Saving Process Operate Dual-Color Printing?
Error reset method	Press the Stop button or Continue button.
Error point	Error detecting condition
967	At the start of dual-color printing operation, the master was made with one print drum in ink-saving master-making mode and the other in normal master-making mode.

Error type	F82 [Paper not compatible for Drum No. 2 printing]
Panel display	F82-*** Printing is Not Available for This Paper Size with Print Cylinder 2 Set Print Cylinder to be Used in Cylinder Position 1 and Re-select Printing Mode
Error reset method	Press the Reset key.
Error point	Error detecting condition
974	The paper size is smaller than the minimum paper size for printing with Drum No. 2.

Error type	F83 [Use of Drum No. 2 mode not possible]
Panel display	F83-*** Printing is Not Available for This Setting with Print Cylinder 2 Set Print Cylinder to be Used in Cylinder Position 1 and Re-select Printing Mode
Error reset method	Press the Reset key.
Error point	Error detecting condition
973	There is no confidential master on Drum No. 1 at the start of printing/proof-printing operation with Drum No. 2.

Error type	F85 [Scanning not possible: External CI not connected]
Panel display	F85-*** ! Scanning is Not Possible ! External CI is not Connected or Processing Connection Check Cable Connection
Error reset method	Press the Close button or Start key.
Error point	Error detecting condition
995	The PS7R is not connected.
997	Jog is unsuccessfully deleted from PS7R.
998	Sanned data unsuccessfully received by PS7R.

Error type	F90 [Supply stock management (ink)]
Panel display	F90-*** Check Stock of Required Ink and Please Order If Needed
Error reset method	Press the Close button.
Error point	Error detecting condition
957	Stock management counter for the relevant color ink is over the Specified quantity (setting value).

Error type	F91 [Supply stock management (master)]
Panel display	F91-*** Check Stock of Required Master and Please Order If Needed
Error reset method	Press the Close button.
Error point	Error detecting condition
958	Stock management counter for the master is over the Specified quantity (setting value).

Error type	F93 [Reproduction ratio is larger than the master making area]
Panel display	F93-*** Present reproduction ratio may not fit in the master making area Please check Please Order If Needed
Error reset method	Press START key to continue, or press CANCEL key to stop. (Change the reproduction ratio manually)
Error point	Error detecting condition
936	With the reproduction ratio set to AUTO, the reproduction image size became larger than the master making area.

Error type	F94 [Protect confirmation (compulsory)]
Panel display	F94-*** - protect - The master will be removed Please Order If Needed
Error reset method	Press START key.
Error point	Error detecting condition
007	The protect function is active when the machine power is turned ON, waking up from sleep, or when the print drum is inserted in the machine.

Error type	F95 [Protect confirmation]
Panel display	F95-*** - protect - The master will be removed Please Order If Needed
Error reset method	Press START key to remove the master, or press STOP key to keep the master on the drum.
Error point	Error detecting condition
008	The message displays after current job is finished with the protect function active.

Error type	F96 [Admin. Mode: Due Date for the ID Counter Report]
Panel display	F96-*** Please inform this message to your administrator Due date for ID counter report
Error reset method	Touch [Close] key, or Press Stop or Reset key.
Error point	Error detecting condition
918	The due date came for the ID counter report set by the Admin. setting.

Error type	F97 [Admin. Mode: Due Date for the Counter Report]
Panel display	F97-*** Please inform this message to your administrator Due date for counter report
Error reset method	Touch [Close] key, or Press Stop or Reset key.
Error point	Error detecting condition
928	The due date came for the counter report set by the Admin. setting.

8. Parameter Errors (H**)

Error type	H01 [General supply parameter input] (Drum No. 1)
Panel display	Ink (Cylinder 1) Cannot Get Consumable Info Input Values Required
Error reset method	Enter the parameters and press the Start key.
Error point	Error detecting condition
566	Enter parameters, since first ink tag color information, steady-state viscosity information, and FP viscosity information are unreliable.

Error type	H04 [General supply parameter input (master)]
Panel display	Ink (Master) Cannot Get Consumable Info Input Values Required
Error reset method	Enter the parameters and press the Start key.
Error point	Error detecting condition
242	Enter parameters, since master tag sensitivity information, steady-state viscosity information, and FP viscosity information are unreliable.

Error type	H07 [General supply parameter input] (Drum No. 2)
Panel display	Ink (Cylinder 2) Cannot Get Consumable Info Input Values Required
Error reset method	Enter parameters and press the Start key.
Error point	Error detecting condition
571	Enter parameters, since second ink tag color information, steady-state viscosity information, and FP viscosity information are unreliable.

9. J-type Error Display (J**)

Paper jam (including AF original feed error) generates an internal [A**] error. However, since this type of error is combined with another error code, the panel displays a [J**] error code.

<*> in the [J**] error code is a value obtained by assigning a bit to each error (one of four types shown in the table below) subject to paper jam processing and adding the numeric values corresponding to the assigned bits.

The detailed error code is displayed by pressing the < * > key on the Operation Panel.

Error type	J** [Paper jam error]
Panel display	J** Paper Jam Remove Paper in Indicated Areas and Press [OK] Button

Error type	Error name	Bit	Numeric value
A10	AF original feed error	Bit 0	1
A09	Paper ejection error	Bit 1	2
A08	Paper jam on print drum (No.1 Drum)	Bit 2	4
A07	Paper feed error	Bit 3	8
A25	Central transport error	Bit 4	16
A48	Paper jam on print drum (No.2 Drum)	Bit 5	32

Example: When <A10> and <A08> are generated, [J05] is displayed.

10.Errors Saved in Memory

The following errors are saved in memory and cannot be cleared simply by switching off the power.

Error type	Description
A04	Master removal error on first print drum side
A44	Master removal error on second print drum side
A08	Paper jam on first print drum
A48	Paper jam on second print drum
A25	Central transport error
C01	First ink cartridge replacement
C41	Second ink cartridge replacement
C02	Master roll replacement
C03	First master disposal box full
C43	Second master disposal box full
C05	Both master disposal boxes full

CHAPTER 17: OTHER PRECAUTIONS

CONTENTS

1. Firmware Downloading Procedure.....17-2

2. Downloading the DSP Software.....17-4

1. Firmware Downloading Procedure

MZ10

See the sketch and photographs on the next page for the reference to the instructions.

- (1) Switch OFF the machine power.
- (2) The firmware can be downloaded by using either a CF Card or USB Memory.

CF CARD:

Remove the Download slot cover from the side of the Rear cover, on the paper-feed side of the machine, by removing one screw (M3x6 screw; 1 pc).

Insert the downloading CF Card containing appropriate firmware for the Mechanical control PCB and NeoROSA PCB for the specific machine model.

USB MEMORY:

Insert the downloading USB Memory containing appropriate firmware for the Mechanical control PCB and NeoROSA PCB for the specific machine model onto the USB host connector on the machine.

- (3) Download the Firmware Programs
 - Normal case
 - Activate the Test Mode No. 90 (Firmware download) to proceed the firmware download.
 - Special case
 - If the firmware download fails, or stops by accidental power down, switch ON the machine power again while pressing the <WAKE UP> key. The firmware download re-starts again.
- (4) The Mechanical control PCB program will download first and NeoROSA PCB program downloads the next. The two firmware programs downloads automatically, one after the other.
- (5) The downloading result can be checked by looking at the three LED status. The three LEDs are found at the entrance of the CF Card inserting slot on the NeoROSA PCB.
The three LEDs are: LED1 (green), LED2 (green) and LED3 (red).

[Normal Downloading Condition]

1. During the Mechanical control PCB firmware program downloading:
LED2 blinks and LED1 and LED3 are OFF.
2. During the NeoROSA PCB firmware program downloading:
LED1 blinks, LED2 lights and LED3 is OFF.
3. At the completion of the two firmware program downloading:
LED1 and LED2 light and LED3 is OFF.

[Abnormal Downloading Condition]

1. During the Mechanical control PCB firmware program downloading:
LED1 and LED2 show error status and LED3 blinks.
2. During the NeoROSA PCB firmware program downloading:
LED1 and LED2 show error status and LED3 lights.

The abnormal (error) status of the three LEDs are described on Page 19-13.

- (6) Remove either the CF Card or USB Memory in following procedure.

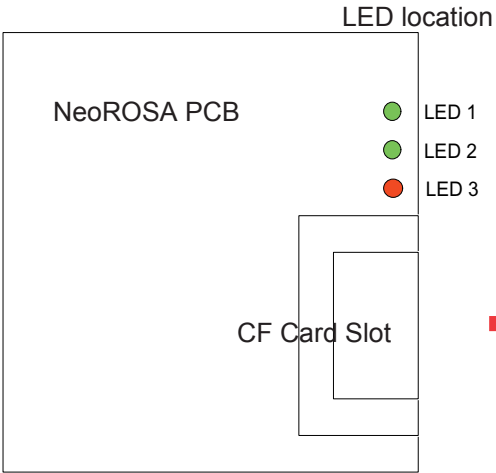
CF Card: Turn OFF the machine power, remove the CF Card and mount the Download slot cover back on the Rear cover of the machine.

USB Memory: Unplug the USB memory from the USB slot on the machine.

CAUTION:

If either the CF Card or USB Memory contained the same firmware program versions to those already in the two PCBs, the firmware downloading action will not take place. The LED1 and LED2 stay OFF and LED3 blinks. In this case, remove either the CF Card (turn OFF the machine power first) or USB Memory from the machine. The machine will operate with the existing firmware program.

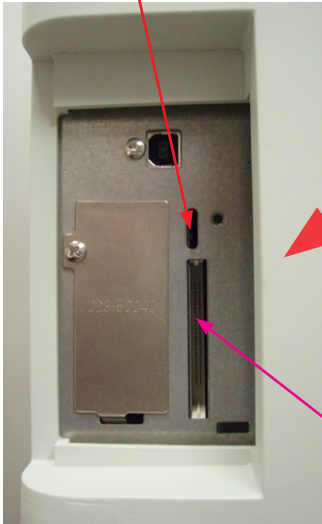
MZ10 < NeoROSA PCB >



Opening for LED status checking



1905

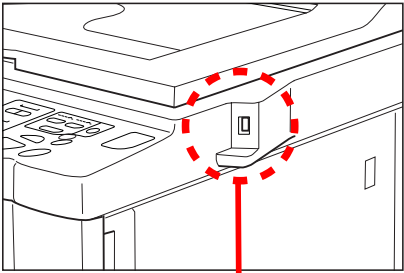


1906



1914

USB Host Connector



1922



1923

2. Downloading the DSP Software

NOTE: The DSP Software is required to synchronize the Second Paper Feed Motor to the Main Motor. The DSP Software is download in the Extension-PCB2. If the Extension-PCB2 is replaced, the DSP Software must be downloaded.

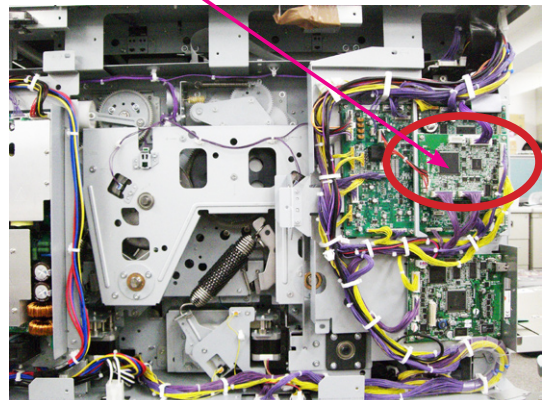
The DSP Software changes the speed of the Second Paper Feed Motor when feeding the paper from the second paper feed area to the print drum, according to the print drum angle when the Timing Roller and Guide Roller start feeding the paper. This control action keeps the image print position constant on all the prints. The DSP Software also controls the Second Paper Feed Motor speed the moment the print drum pinches the leading edge of the paper. When the leading edge of the paper arrives at the print drum, according to the paper size and to which print drum the paper is sent to, the trailing edge of the paper is still pinched by the Timing Roller and Guide Roller. The DSP Software makes sure that the Second Paper Feed Motor feeds the paper in the same speed as the print drum to ensure smooth paper feeding through the printing area to prevent smeared image which may occur if the Timing Roller and Guide Roller pull on the paper during the printing.

The DSP Software version should match with that of the Mechanical Control PCB and NeoROSA PCB firmware. The compatibility information on the firmware program versions will be issued at the same time when updated DSP Software is announced.

- (1) With the appropriate firmware for the mechanical control PCB and for the NeoROSA PCB downloaded, turn ON the machine in test mode to confirm that the machine properly goes into Test Mode.
- (2) Switch OFF the machine power and insert the download CF Card in an adopter or in USB Memory Stick, containing the DSP software.
- (3) Launch Test Mode and run Test Mode No. 102 [DSP Download (Main, Secondary)].
- (4) Check the operation panel and make sure that the download is completed (The download should take around one minute).
- (5) Switch OFF the machine power and remove the CF card or USB memory stick.
- (6) Launch Test Mode again and run Test Mode No. 126 (Optional Configuration Check). Check the software version on the display to confirm that the DSP Software is upgraded.

MZ7 & MZ9 Series contain the DSP Software in the Mechanical Control PCB.

MZ8 & MZ10 Series contain the DSP Software in the Extension-PCB2.



RISO MZ870/MZ890/MZ1070/MZ1090 Technical Manual
<Differential information compared to the existing MZ7 & MZ9 Series.>
(Rev. 0.91)
Published October 2010
Reproduction and duplication prohibited
Edited and published by: Overseas Technical Department,
RISO KAGAKU CORPORATION

The contents of this manual are subject to change without notice